

Issue 23 • Apr 15 1989

Only
48p!

New classified section! - page 18

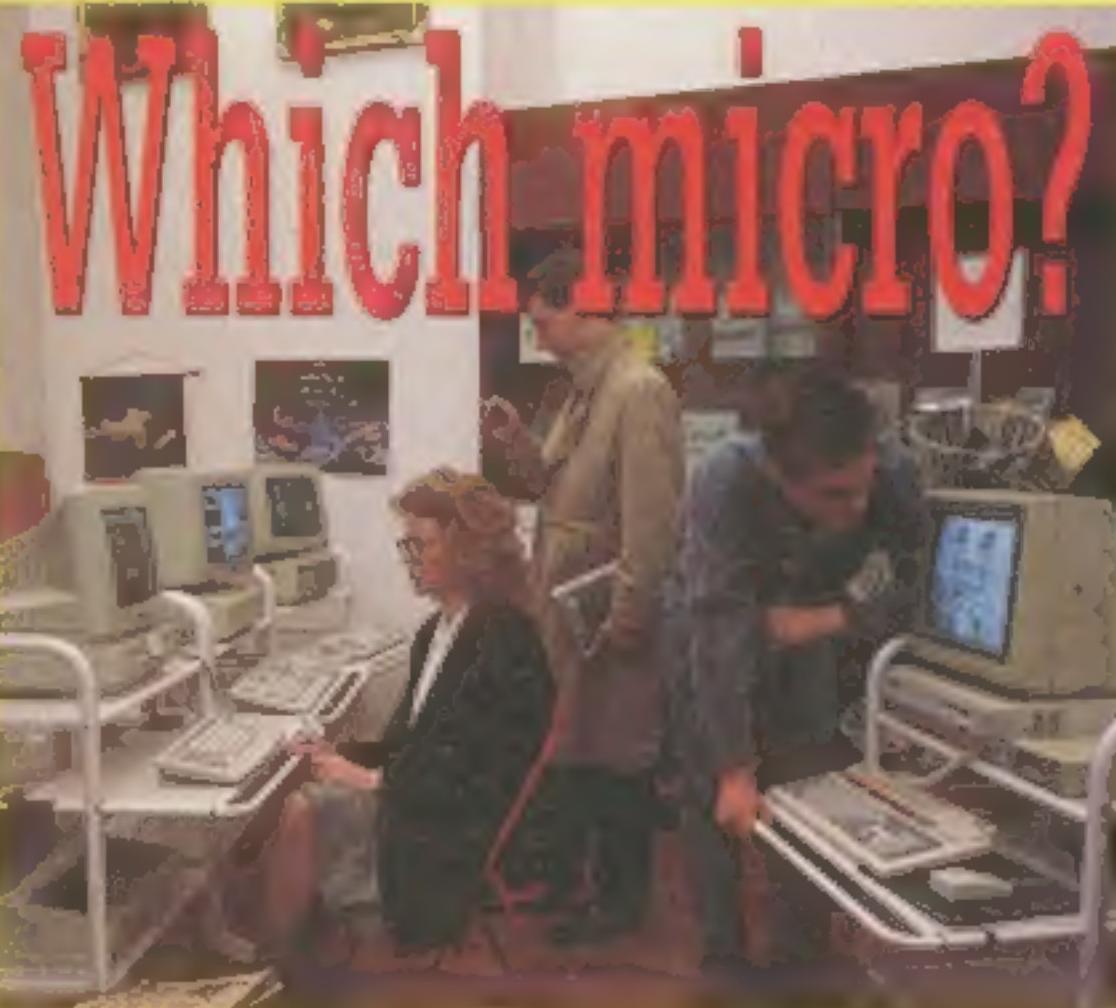
COMPUTER EXPRESS

First news, first reviews - every week



DUNGEON MASTER

Why the best selling ST game won't be out on the Amiga 500 page 3



Which micro?

Buying a computer? The best sub-£500 machines chosen for you

page 15

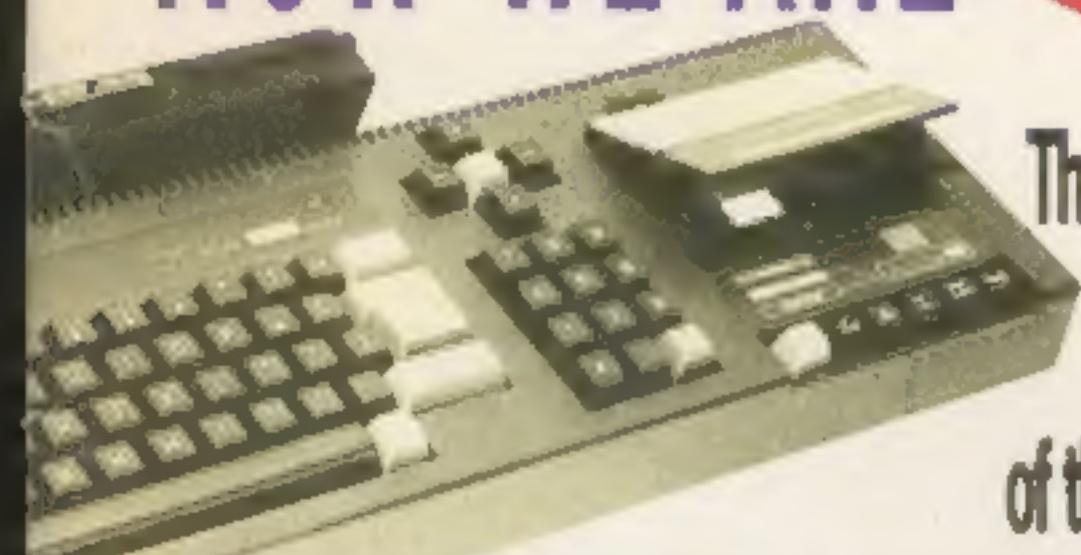
BUG SHOCKER HITS AMSTRAD

MS DOS 4 replaced
on top range PCs

page 2



NOW WE ARE 5



The inside
story
of the CPC

page 15

Alternative strategy

Report on the "other micros" show

page 24



Sections for YOUR machine

PC

Amiga

Atari ST

Spectrum

C64

CPC

PCW

QL

BBC

MSX

pages 33-40

CONSOLE YOURSELF



The BEST
in console
software

page 28

STRIKE A BLOW



TYPHOON THOMPSON
Storms the ST

page 47

MORE HARD LUCK FOR AMSTRAD

Amstrad's up-market PCs have been once more dogged by problems - their second major computer headache this year.

The hard disks on their 2386 machines had been giving

inexplicable read-write errors. Earlier this year some of its PC2086 range had also been giving problems due to a faulty hard disk controller. Amstrad had to ship out thousands of small parts - worth two pence - to rectify the problem.

Many pundits took this as an indication of Amstrad's growing interest in other projects such as satellite TV and a gradual shift of emphasis away from the computer side.

Now Amstrad has tracked down the 386 fault. It was not due to hardware, but to a bug in MS-DOS version 4, it announced this week. Read failures occur whenever parts of the disk separated by exactly 32MB are accessed in close succession.

Chairman Alan Sugar said the decision to use Microsoft's current state-of-the-art MS-DOS 4 - which works on a GEM-like windows and



• Hard life: More problems for Amstrad with PC hard disks

icons interface - had backfired "through no fault of our own".

"I am upset that until now our 386 has not earned the reputation it deserves, when in fact our hardware has proved to be very reliable and the problem has been caused by Microsoft's MS-DOS 4," he added.

Microsoft's Bill Inglis commented: "There were a few bugs on version 4 of MS-DOS, not just on the 386 but on all the machines using it. This one only becomes apparent under relatively unusual circumstances and was pointed out to us by Amstrad."

Amstrad's Nick Hewer told Express: that no customers had been affected by the problem. "We have fixed the bug ourselves with the approval of Microsoft and have shipped the amended version of DOS 4 to our dealers."

Amstrad has had to move very quickly to fix things in order to keep up its hopes of dominating the serious end of the PC market. While its grip on the small business and home user has been very strong through the PC1512 and PC1640, it has not had a significant effect on the top end of the market.

Printer problems

Mannesmann Tally's MT222 - a 24 pin printer offering "far superior" print quality - has been put on 'technical hold' with as many as one in twenty being unusable.

This effectively means the printer is unfit for sale and is being recalled. Peter Pratt of MT's UK sales team said "about 1 in 20 were unusable. Rather than tarnish our reputation, we decided to contact our parent company in Germany and get a permanent solution. We are trying to trace them and are resupplying MT230s, with a higher specification. But people just won't let go of their MT222s".

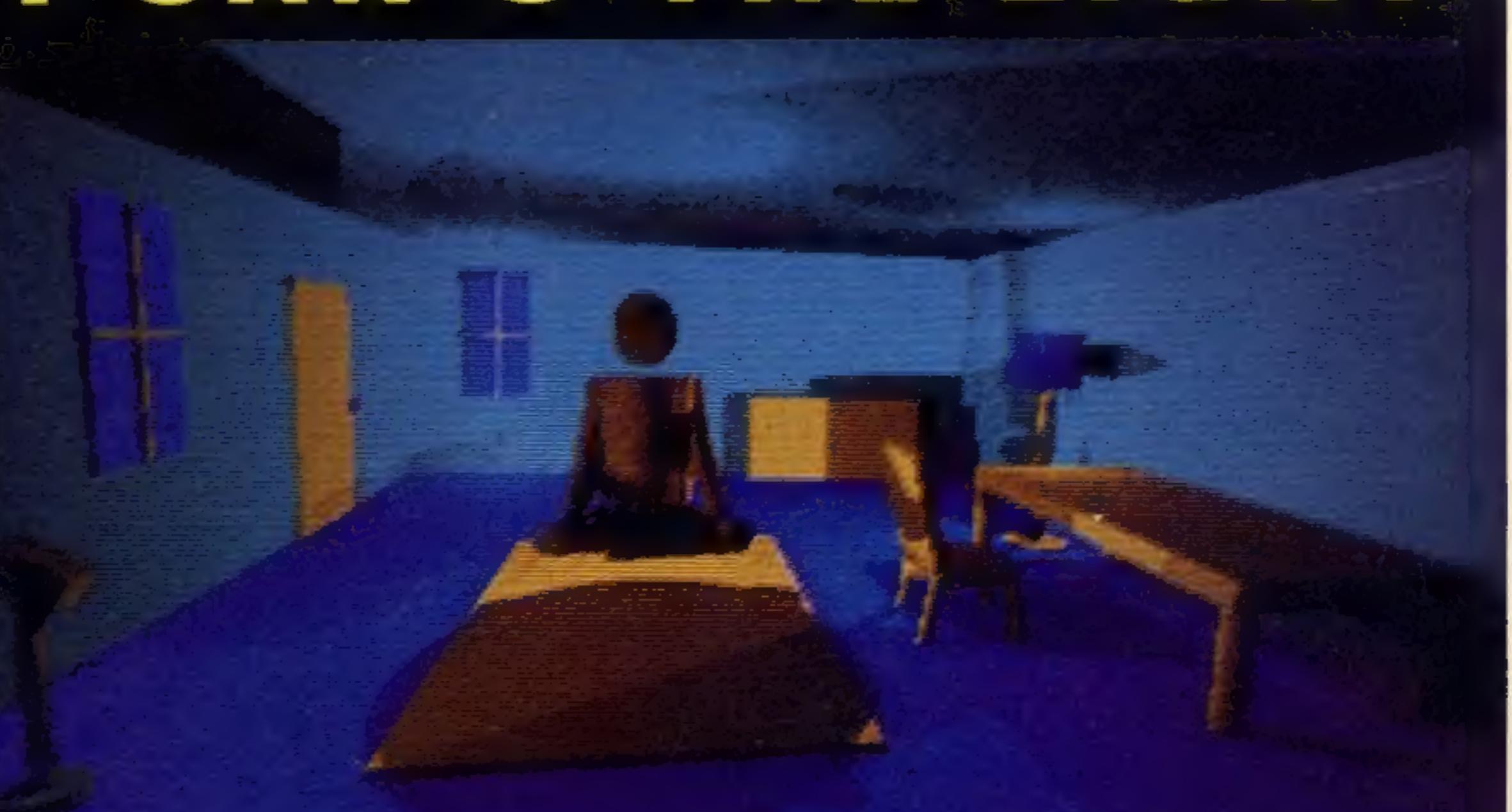
Chris Hewitt of MT said the trouble was that "the UK has higher standards than many countries. It's been selling well overseas".

When the printer is available again, it will be £695 plus VAT and claims a speed of 72 cps - over twice that claimed for the Amstrad LQ3500. MT is on 0734 788111.



• Hold it: MT222 hits problems

I CAN C THE LIGHT



Already spoilt for choice in the field of graphic packages, Amiga owners now have another graphics package to look at. C-Light is a 3D real-time animator - using

multiple light source ray tracing techniques - for the Amiga priced at £49.95. Further details from Artronic Systems on 0423 525325.

• Room for manoeuvre: New animation package for the Amiga

SCRAMBLED EGOS

If you feel you can't manage because you don't understand people, Ivy Software's new program could be what you're looking for.

How to Manage People Effectively is the latest in a line of management skills training packages for the PC. It claims to provide users with 'a practical model of personality enabling them to develop much greater understanding of their own and others' personal behaviour.' It also explains the building blocks of personality and ego states and promises to improve managerial performance.



- What us? Miss out on Gorbiemania. No chance. The Soviet number one took the time out during his visit to the UK to take a look around network specialist CASE's Watford plant. The area is a Government backed demonstration site for Computer Aided Design (CAD) applications. According to CASE's top brass the Soviet president is keen to see computers being used in industry.

SCRAPPED

Mirrorsoft drops A500 Dungeon Master plans

Contrary to repeated assurances that a version of *Dungeon Master* would be made available for Amiga A500 owners, Mirrorsoft - distributing the program on behalf of FTL in Europe - has had to abandon the project.

The majority of Amiga owners will now not have the chance to try the arcade adventure that instantly became a classic and has become the biggest selling game on the ST.

Paul Boelhaus, FTL's marketing manager in the States, told Express, "We

went to great lengths to fit *Dungeon Master* into the standard A500. We reduced the amount of graphics and sound became almost non-existent, but even this effort was unacceptable". Boelhaus cited the Amiga's memory management and allocation procedures as the main cause behind FTL's difficulties in fitting everything in. He added: "We know it looks at though we're abandoning the standard A500 user, but this is far from the truth. This has been a painful decision for us."

FTL has several projects under development in the US at the present, including *Chaos Strikes Back* - an expansion disk for *Dungeon Master* incorporating a graphics editor, allowing users to change their on-screen character representations - due for worldwide release on the ST next month.

Obviously, as *Chaos Strikes Back* will not run without a unexpanded A500 users won't be able to use this FTL title either. FTL is said to be working on *Dungeon Master II* but 'no details are available at present'.

"Naturally we are extremely disappointed," Mirrorsoft's Cathy Campos told Express. "The reason is FTL's



Dungeon Master: No Amiga 500 version - and that's official

DHSS TO INTRODUCE COMPUTERS

'Expert system' computers which can give unbiased advice to social security claimants have been demonstrated in London this week.

Logica, which specialises in developing expert systems, unveiled its 'Advice System' after five years of work. Social security claimants who want to avoid the embarrassment of personal interviews are said to need no computer knowledge to use the system and can ask the computer direct questions such as 'Can I claim Child Benefit?'. "It's quite an easy system, written in everyday language" said Logica's Lorette Nettar. "You can even ask it things like 'Why not?' or 'What's this got to do with it?'".

The system won't be installed until it has undergone a few years of tests to see how people would take to it.

commitment to quality - they didn't want to compromise their standards for commercial considerations. If we could have released a version for the Amiga 500, we would have cleaned up."

Mirrorsoft had been most confident that FTL would be able to fit the game on the A500. Last February the firm told Express that it was due to be out this month. Suggestions that it would not materialise were hotly denied by Mirrorsoft at the time.

In the UK only about 10% of Amiga 500 owners have had the memory upgrade enabling them to run 1 meg games such as *Dungeon Master*.

Scanner scam

The public is being misled over the specification of some scanners, it was claimed last week.

With the scanner market exploding at up to 25% growth per month, prices are beginning to come down making the market reachable by the home and small business user. But, claims scanner distributor Cameron MacSween, double talk is also creeping in in the form of dots.

"Mitsumi of Japan make the only commercially available scanner that can produce 300 to 400 dots per inch across

the scan," he told Express. But some manufacturers, he said, omitted to tell the truth about some other scanners such as some of those made in Japan which can only simulate 400 dpi by duplicating a 200 dpi scan. "The manufacturers represent their product correctly in all their literature. Not so with the marketeers," he said.

The Atari-compatible Type 4 scanner, available now, is a true 400 dpi scanner. "With a glass or two of whisky," said MacSween, "you may imagine it capable of 800dpi!".



Scan and deliver: How scanners can be daylight robbery

CONTENTS

FEATURES

BUDGET SYSTEMS 15

Buying on a budget? Read the Express guide to what you can get for £500

HISTORY OF THE CPC 21

Alan Sugar's first foray into the micro market

ALTERNATIVE MICROS 24

Remember the Memotech? What happened to the Adam? Express finds out at the Alternative Micro Show

CONSOLES 28

Six dedicated games machines compared

REGULARS

EXPRESS COMMENT 4

CHARTS 5

LETTERS 11

BEGINNERS 32

JOB 40

TECH TIPS 42

CLASSIFIEDS 46

GAMES 47-48

Typhoon Thompson, The Running Man, Vindicators, Sanxion, Arnhem: The Market Garden Option, Fright Night

GAME PREVIEWS 49

Blood Money, Super stuntman, Run the Gauntlet, Shinobi, Renegade III, Ringside

VOUCHERS 51

BACK PAGE 54

YOUR MACHINE

ST 33

PC 34

Amiga 35

Spectrum 36

Commodore 64 36

PCW, QL 38

BBC, MSX 39

CPC 40

COMMENT

Summer better than others

The casual reader might be forgiven for thinking that two stories in these pages are contradictory. On the one hand we read about Amstrad's problems with faulty hardware; on the other we are told that dealers quite clearly see Amstrad as making the most reliable machines (though they also see Amstrad's ad campaigns as 'very good', a view not universally held).

The solution to the paradox is simple. Amstrad's main business has been, and still is, in the home sector - Alan Sugar's famous lorry driver who bought the CPC, five years old this week, and still going strong. In that, it has proved unbeatable: sturdy machines, reasonable specifications - and most importantly cheap prices that anyone can afford. The machines featured in the survey were Amstrad's top favourites: CPC, PCW, PC1512 and PC1640. These are the reliable, no-nonsense machines that were developed in the pre-satellite, pre-top-end PC days. (Though the survey doesn't mention the PC200's distribution foul-ups last year, or the problems with the German PCWs).

The top end stuff - Amstrad's PC 2086, 2286, 2386 - were not included, since they're still not widely available. These are the machines that represent Amstrad's sortie into the 'serious' business market, the land currently dominated by IBM with everyone else nowhere. And these are precisely the ones that have caused Amstrad problems.

Whatever the cause of the problems were before, this time Amstrad can quite legitimately plead Not Guilty and point to the fact that it found and corrected someone else's bug itself, and has rectified things with laudable speed. But one swallow doesn't make a summer, as the recent April snow showed; equally, the undoubted reliability of the CPCs and PCWs does not guarantee Amstrad sunshine in the business sector.

A-Z of knowledge

A forewarning that next week Express is starting a major new series of articles which will build week-by-week into a definitive encyclopaedia of computing. A is for Acorn, Amstrad, Atari, Activision, Apple, ACE, Amiga, Abacus, ATW, Asteroids, Ada... Don't miss it.

EDITOR.....Rob Ainsley
NEWS EDITOR.....Colin Campbell
REVIEWS EDITOR.....Andy Storer
TECHNICAL EDITOR.....Jerry Glenwright
STAFF WRITER.....Rik Haynes
ART EDITOR.....Angela Neal
ART ASSISTANT.....Harriet Athay
PRODUCTION EDITOR.....Rod Lawton
ADVERTISEMENT MANAGER.....Mark Salmon
DEPUTY AD MANAGER.....Jennie Evans
AD EXECUTIVES.....Sarah King
AD TYPESETTING.....Terry Turner
PUBLISHER.....Greg Ingham

© Future Publishing Ltd 4 QUEEN ST, BATH, BA1 1EJ
TEL: 0225 446034 • FAX: 0225 446019
Printed by Redwood Web Offset, Trowbridge, Wilts
Distributed by Comag, West Drayton, Middx

TELECOMSOFT SNAFFLED UP

In what is certain to be the biggest deal of its kind, MicroProse is set to complete the purchase of



• Byrne: Telecomsoft sold

Telecomsoft in the next two weeks, Express can reveal.

The rights to all products on the Rainbird, Firebird and Silverbird labels will pass over to the American firm. Some 180 already releasable versions of new games are included: Telecomsoft has been holding back on some titles, pending the deal.

But it is understood that MicroProse has not as yet secured the rights to publish any new Magnetic Scrolls' games. This jewel in Telecomsoft's crown is being negotiated as a separate agreement.

Telecomsoft's budget games and back catalogue rights are almost certain to be sold to Virgin Mastertronic, since MicroProse has little immediate interest in the cheapos market. Virgin said that it

CHEAP SOMETHING

A new program allowing you to work a PC by remote control from another over the telephone lines is available at a special price from Acton Computer Supplies. This allows users to work their office PCs from home, for example, giving them access to their business programs and database. Carbon Copy Plus costs £97.50; Acton is on 0800 333 333.

had decided against bidding for the full company primarily because of the high guarantees given to programmers.

The deal is said to be costing MicroProse in excess of £2 million, and follows some months of protracted discussion, in which it just headed off the French firm Ubisoft. Initially, it was expected that Telecomsoft's boss Paula Byrne would lead a management buy-out. But MicroProse's interest upped the price and Byrne had to pull out.

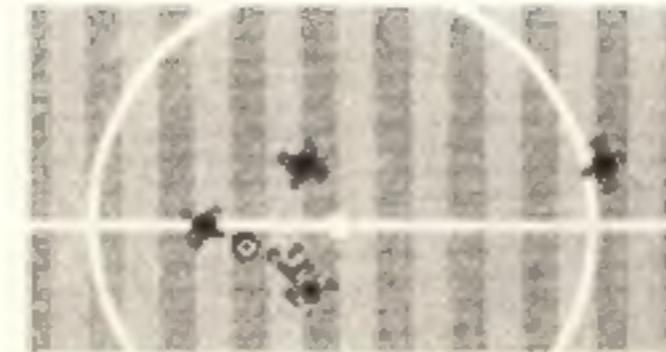
Byrne will not be joining the US firm, due to "a totally mutual lack of desire to work together", according to one well-placed figure. The apparent displeasure felt by Telecomsoft staff that MicroProse had won the battle will not prevent the majority of them from moving over.

This is your lifestyle

Apart from the Telecomsoft scoop MicroProse is to launch two new labels aimed at specific 'lifestyles' of the games market. And one of their first releases will be an antidote to all those violent shoot-'em-ups - a Greenpeace game.

Both labels will be 16-bit led and few, if any, 8-bit games are expected to feature in the forthcoming releases. Microstyle will target its games at the 'aspirational' late teens age group, including racing sims and shoot-'em-ups. The first release will be a motorbike sim produced in association with Joey Dunlop.

Microstatus aims at the more affluent buyers in their middle twenties and will include the Incentive titles it signed up, as reported in Express last week, and 'more detailed' games. The first release will be a Greenpeace game. Out to coincide with the launch of the well-publicised Greenpeace rock album that



• 16-bit soccer, Greenpeace and new labels

has already brought the likes of Annie Lennox, Peter Gabriel and Sting to Russia, the game features environmentally aware activities such as sabotaging seal culls by spraying seals with green paint before the Eskimos can catch them, to make the pelts worthless.

"Within our sphere of military simulations, we were the best, but now we're trying to broaden our horizons across the market spectrum," said Microprose's Martin Moth. "So we're tailoring the two new labels towards two particular types of buyers."

Both new games will be out on ST, Amiga and C64 in May. MicroProse will also be bringing out a 16-bit version of its soccer sim in the middle of this month. MicroProse Soccer will be £24.95 for the ST and Amiga.

Virus help

After the news last week that a non-profit making organisation to help computer users fight viruses, COTRA, has been set up, comes an incentive for people who think they've got solutions to the virus problem.

The Institute of Chartered Accountants is offering an IBM PS/2 50Z, printer and software, for the 'best initiative for preventing, curing or combating them'. Details from Nikki Mugridge on 01 628 7060. COTRA - the Computer Threat Research Organisation - can be contacted on 0836 865944, or at 144 Sheerstock, Haddenham, Bucks HP17 8EX.

FIFE GO MAD...ON MACS

The domination of Acorn machines such as the BBC and Archimedes in British schools is being challenged. Schoolchildren in Fife will be able to use Apple Macintoshes from May for their projects and general school work.

Fife Regional Council has placed an order worth half a million pounds to place Mac IIs and SEs and laser writers in every school in the region, from the smallest primary school with nine pupils to the largest secondary school.

The Macs - which cost several thousand pounds each - were chosen, said a spokesperson, for their "consistent and easy to use interface".

• Fife schools to get Mac attack



ELECTRONIC ARTS SOFTWARE CLASSICS



• Classical training: Half-price games from Electronic Arts

Games house Electronic Arts is releasing some of its best-selling titles at under half-price. The Software Classics range will feature award-winning hits such as *The Bard's Tale*, *Marble Madness* and *Chessmaster 2000*.

The ten titles will be released in May, each costing £9.99 for ST, Amiga and IBM PC, £6.99 for 8 bit disks and £2.99 for 8 bit cassettes.

Tim Mott of Electronic Arts commented "These are established, award-winning products - true classics - now at half price or less". The titles are: *The Bard's Tale*; *Chessmaster 2000*; *Marble Madness*; *Skyfox II*; *World Tour Golf*; *Earth Orbit Stations*; *Articfox*; *Legacy of the Ancients*; *Music Construction Set*; and the *Archon Collection*.

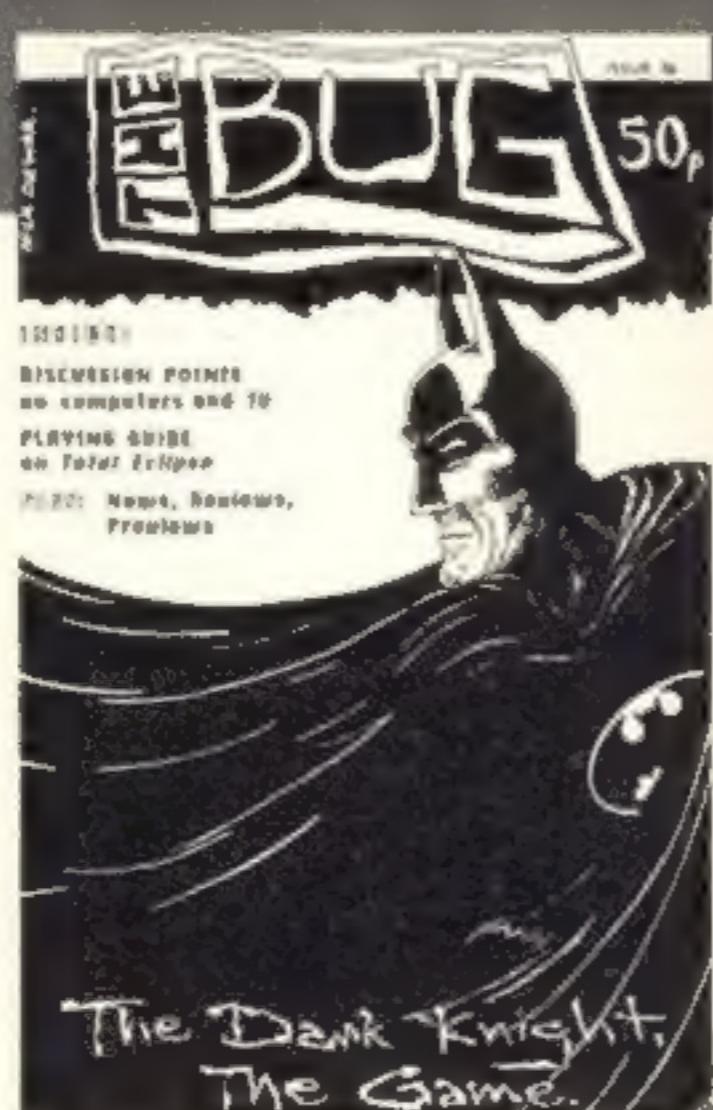
This comes two weeks after Ocean announced its first budget game. Games players will be hoping this is another sign of cheaper 16-bit games to come.

FOR A FEW THOUSAND DOLLARS MORE

Steve Jobs' much publicised NeXT workstation - touted as the next step up from Jobs' Apple Macintosh that has become the standard machine in America - will go on sale to the public next month in America's Businessland stores.

But don't rush over until you've upped your credit card limit a little. The price will be \$9,995 - \$3,500 more than educational institutions have to pay.

LAST GASP FOR THE BUG



All good things come to an end. The Bug, Britain's best-loved computer fanzine, is winding down after 36 issues - because its writers are going to university.

The magazine started in Muswell Hill in London in 1984, covering the Spectrum, Amstrad and Amiga in a characteristically 'alternative' style. "We thought the glossy mags weren't providing an accurate view of the software world, so we decided to publish and put our views across," said co-editor Jeffrey Davey. The first issue was duplicated, cost 15p, and had a circulation of 50. The radical approach caught on and in its heyday *The Bug* sold over 1500, and even had sponsorship for a while.

Davey is hoping to study Politics and Philosophy at Reading and co-editor Jaron Lewis is going to Nottingham University. "Five years is a fair whack," said Davey, "and with the other editor, Kelsey Lewis, moving to Exeter it would be difficult to continue". They intend to carry on writing freelance for other

• The Bug's last bite: but it's going out with a bang

computer magazines.

The final celebration issue will be professionally printed, cost 55p, and feature awards and articles by all *The Bug*'s writers over its five-year history. It will also have a British fanzine first - a cover mounted cassette.

SKWEKY CLEAN UP

Skweek! is the first game from French software company Loriciels since it split from Elite three months

ago. Casting the player as a "furry orange bundle of fun" in a derivative of the classic Pacman, *Skweek!* is due for

release next month, via US Gold, on CPC, ST, Amiga and PC - no price has yet been fixed for this wee beastie.

TOP 20 Full Price GAMES

1	Robocop	OCEAN
	Spectrum, C64, CPC, ST, Amiga	
2	Dragon Ninja	OCEAN
	Spectrum, C64, CPC	
3	WEC Le Mans	IMAGINE
	Spectrum, C64, CPC, ST, Amiga	
4	Operation Wolf	OCEAN
	Spectrum, C64, CPC, ST, Amiga	
5	Middle Earth	MELBOURNE HOUSE
	Spec, C64, CPC, ST, Amiga, PC	
6	Emlyn Hughes	AUDIOGENIC
	Spectrum, C64	
7	In Crowd	OCEAN
	Spec, C64, CPC	
8	Fun School 2	DATABASEMANIA
	Spectrum, C64, CPC, ST, Amiga, BBC	
9	Afterburner	ACTIVISION
	Spectrum, C64, CPC, ST, Amiga	
10	Football Manager 2	ADDITIVE
	Spectrum, C64, CPC, ST, Amiga, PC	
11	Double Dragon	MELBOURNE HOUSE
	Spectrum, C64, ST, Amiga, PC	
12	Pacland	GRANDSLAM
	Spectrum, C64, CPC, ST, Amiga, MSX	
13	Run the Gauntlet	OCEAN
	Spectrum, C64, CPC, ST, Amiga	
14	Giants	US GOLD
	Spectrum, C64, CPC	
15	Renegade 3	IMAGINE
	Spectrum, C64, CPC	
16	Thunder Blade	US GOLD
	Spectrum, C64, CPC, ST, Amiga	
17	Batman	OCEAN
	Spectrum, C64, CPC, ST, Amiga	
18	R-Type	ELECTRIC DREAMS
	Spec, C64, CPC, ST, Amiga	
19	Arcade Muscle	US GOLD
	Spectrum, C64, CPC	
20	Gary Lineker	GREMLIN
	Spectrum, C64, CPC	

TOP TEN Budget GAMES

1	Treasure Island	CODEMASTERS
	Spec, CPC	
2	Twin Turbo V8	CODEMASTERS
	Spec, CPC	
3	Joe Blade 2	PLAYERS
	Spectrum, C64, CPC, BBC, Electron, C16	
4	Super Cycle	KIXX
	Spectrum, C64, CPC	
5	Ghostbusters	MASTERTRONIC
	Spectrum, C64, CPC, Atari 8-bit	
6	Spy Hunter	KIXX
	Spectrum, C64, CPC	
7	World Games	KIXX
	Spectrum, C64, CPC, MSX	
8	Street Gang	PLAYERS
	Spectrum, C64, CPC	
9	Turbo Esprit	ENCORE
	Spec, C64, CPC	
10	The Double	ALTERNATIVE
	Spectrum, C64	

RE re-entry • NE new entry • Last week's positions • Compiled by Gallup
The charts shown are based on the Open Market, that is retailers who stock a broad range of products. All charts shown are copyright of Gallup.

DEALERS BACK JAPS AND AMSTRAD

A survey of the UK's main computer retailers has revealed that most of them see Amstrad and Japanese-made hardware as the most reliable. Amstrad also rates best on technical support and

backup, though this is generally considered bad.

The survey, which was carried out by newspaper Computer Trade Weekly, revealed that no retailers believed more than 1 in 11 of their

Sega or Nintendo consoles were faulty. Only a few dealers reported the same figure for the Amstrad PCW and none reported faults higher than 1 in 8 for the five-year-old CPC, which was seen as the most reliable machine apart from the consoles.

On the other hand, more than 1 in 8 Spectrums (a hang-over from pre-

Amstrad days) were thought of as faulty by 40% of dealers, with C64s and 128s hitting a similar figure.

The same survey showed the Amstrad PCW was the most widely available machine, being stocked by three-quarters of dealers, with the PC1512 and PC1640 notching over 60%. The Amstrad PPC was the most widely available portable.

Technical support and backup was rated by the overwhelming majority of dealers as 'fair' to 'poor' for Acorn, Commodore and Atari, and 'not very good' to 'good' for Amstrad. Over half those interviewed thought Amstrad's ad campaigns were 'very good', everyone else being rated 'fair' to 'good'.

The sample was not weighted and did not claim to be definitive market research, but included information from over 350 dealers.



• Faithful Arnold: Dealers say CPC is the most reliable computer

Common Commodore

There are going to be more Commodore machines in the High street soon. 258 Tandy stores across the country will be stocking the C64 Hollywood pack, 20 John Lewis computer stores are taking the Amiga and toy chain Hamley's is 'committed' to Commodore machines.

VIDEO STAR

Hot Shot Entertainments Action - the video that gives you snippets of the forthcoming games releases of the month, as featured in Express news in issue 21 - is coming down in price.

The 25-game, 45 minute tape 'magazine' is now £4.99, down from £6.49. Copies should be available in most high street software retailers.

16 BIT CENTRE

FREE DISK BOX (Capacity 80 disks) WITH EVERY ORDER OVER £200.00

(ALL PRICES INCLUDE VAT AND DELIVERY)



Atari STFM Super Pack inc

21 Games, ST Organiser, Mouse, Joystick and Manuals
ONLY 339.00

Philips 8833 Stereo Monitor

ONLY 229.00

OTHER HARDWARE

Minigen (Amiga)	£105.00
Citizen 120D Printer inc Lead	£139.00
Citizen 180E Printer inc Lead	£179.00
Star Mono Printer inc Lead	£199.00
Star Colour Printer inc Lead	£249.00
Star LC-24/10 Printer inc Lead	£319.00
NEC P2200 24 Pin inc Lead	£319.00
Commodore MPS1250 inc Lead	£139.00
NEC Multisync 2 Monitor/Lead	£527.00
Commodore 1084 S Monitor/Lead	£235.00
Amiga B2000	£964.00
Commodore PC1 inc ABLE 1 S/W	£287.00
Amstrad 1640 - Mono Monitor	£560.00
Cumana Disk Drive (ST/Amiga)	£99.00
Amiga A501 RAM Expansion	£129.00

Amiga A500 inc. 3 Commercial Games, Photon Paint or Aigus Sonix, Joystick + Mouse Manuals etc.
ONLY 399.00

Atari SM124 Mono Monitor
ONLY 99.00 (inc. Lead)

SOFTWARE

The Works (Amiga)	£69.00
Kind Words V2 (AM)	£39.00
Lattice C V5 (AM)	£165.00
Fantavision (AM)	£29.00
First Word Plus (ST)	£69.00
Microsoft Write (ST)	£99.00
Devpac II (AM/ST)	£48.00
ST Replay V4	£69.00
Kodak 5.25 Disks*10	£8.50
Kodak 3.5 Disks*10	£14.95
Unbranded 3.5" Disks	
10	£9.45 25
50	£45.00 100

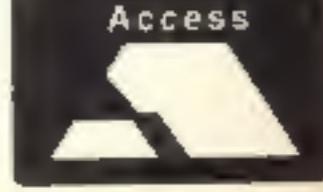
16 BIT CENTRE

Unit 17, Lancashire Fittings
Science Village, Claro Road, Harrogate
N. Yorks. HG1 4AF
Tel: 0423 531822 / 0423 526322



BARCLAYCARD

VISA



SEGA®

**Number 1 for
TV Arcade Action**



£99.95



£129.95



£14.95



£39.95



£79.95



£29.95

Spring Madness

SUBJECT TO AVAILABILITY FROM PARTICIPATING STOCKISTS

The Sega Mastersystem inclusive of Light Phaser *available to you for only £89.95.
Recommended Retail Price £109.90



RAMPAGE

You and your buddy are ready for a little action tonight 'cause you just happen to be in the mood to tear up the town. You'll demolish buildings, grab and chomp horrified spectators and other yummy morsels, and flatten puny helicopters and other antagonists who try to stop you!

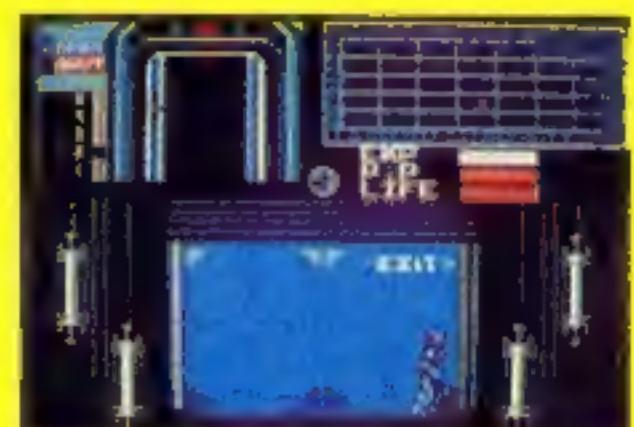
Addictive gameplay, marvellous graphics combined with originality and a great sense of humour! C+VG, March 1989



'R' TYPE

They came from a Dimensional plane clear across the galaxy, wreaking havoc and chaos from star system to star system. With an evil that smothers all resistance with fear and terror, the horrid creatures of the Bydo Empire are now knocking on, Earth's front door.

Is by far the best blast available on the Sega, so it goes without saying that no shoot 'em up fan should be without it! C+VG, March 1989



CYBORG HUNTER

The year, 2242 you are Paladin, the toughest bounty hunter in the galaxy. Monstrous Cyborgs are threatening to take control of the Universe under the direction of their evil leader, Vipron. Your mission is to gain access to Vipron's chambers and destroy him. Sound easy enough? It isn't!

Horizontally scrolling arcade adventure, action packed! C+VG, March 1989



Y's

You are Aron Christian, a swordsman washed ashore by the might and fury of a hurricane. You were found half dead by a kind and humble fisherman and he restored you to health. The fishing village sat at the edge of the great plain. Rising in the distance was a small mountain range with an ominous tower at its peak. 'That is the Tower of the Doomed; the fisherman told you as they made the sign of the evil eye. 'It is the place where the troubles of our land began.' As you watched the tower, you knew that your destiny waited there.

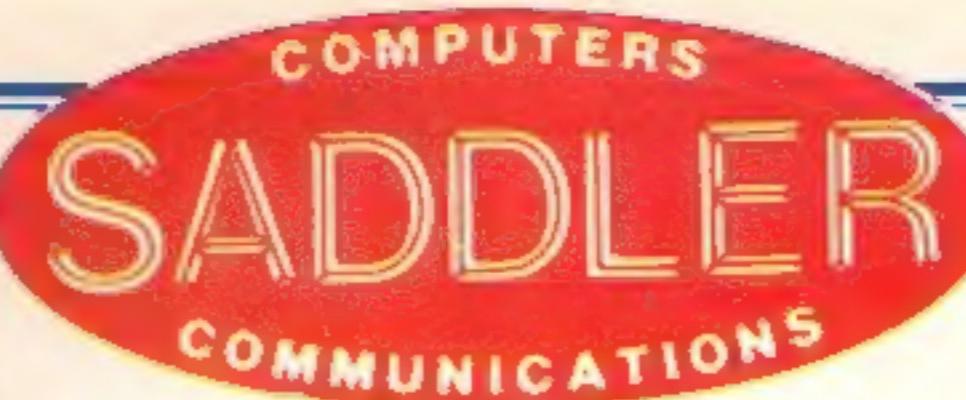
The whole thing looks incredible - the best I've seen on the Sega. Y's offers depth and playability and will keep you engrossed for weeks. It's a must! C+VG, March 1989

The No.1 best selling console in the UK

Distributed by

Virgin Mastertronic, 2-4 Vernon Yard, Portobello Road, London W11 2DX.

Our Showroom is only 1 mile from Junction 23. M6. Just Past, Haydock Park Racecourse (Open Six Days)



(Please ask for M.O. Dept. quoting NCE)
Telephone (0942) 719122 (24hrs)
Fax: (0942) 271226

Saddler Computer Services Ltd, 71/77 Warrington Road, Ashton-in-Makerfield, Nr Wigan. WN4 9PJ

AMSTRAD PC1512/1640

PC 1512	SD MD	£366.00
PC 1512	SD CD	£444.00
PC 1512	DD MD	£444.00
PC 1512	DD CD	£522.00

SPECIAL OFFER - Buy an Amstrad DMP 3160 Printer with any PC1512 this month for only £95.00

PC 1640	SD MD	£455.80
PC 1640	SD CD	£545.00
PC 1640	SD ECD	£630.00
PC 1640	DD MD	£519.00
PC 1640	DD CD	£608.00
PC 1640	DD ECD	£699.00
PC 1640	HD MD	£699.00
PC 1640	HD CD	£786.00
PC 1640	HD ECD	£875.00

TV ADAPTOR

NOW FOR THE AMSTRAD PPC AND 1640 COMPUTERS

PPC	£36
PC1640	£41

FULLY REFUNDABLE IF UNHAPPY WITHIN 7 DAYS

EXTERNAL 5 1/4" D/D
FOR THE
PC 2086/PC200
ONLY £109

AMSTRAD PORTABLES

PPC 512 SD	£372.90
PPC 512 DD	£482.90
PPC 512 DD + 12" MD	£507.00
PPC 640 SD	£456.71
PPC 640 DD	£565.71
PPC 640 DD + 12" MD	£589.00

NEW!
PORTABLE HARD
DISK DRIVES FOR
AMSTRAD PPC'S

CUMANA 20Mb	£395
CUMANA 30Mb	£420

REMEMBER:

Our knowledgeable staff are always willing to give help and advice to help you choose what's best for you!

THE NEW AMSTRAD PC2086 RANGE

SD 12MD (SINGLE DRIVE WITH 12" MONO)	£565
SD 14CD (SINGLE DRIVE WITH 14" COLOUR)	£695
SD 12HRCD (SINGLE DRIVE WITH 12" HIGH RES. COLOUR)	£785
SD 14HRCD (SINGLE DRIVE WITH 14" HIGH RES. COLOUR)	£865
DD 12MD (TWIN DRIVE WITH 12" MONO)	£670
DD 14CD (TWIN DRIVE WITH 14" COLOUR)	£800
DD 12HRCD (TWIN DRIVE WITH 12" HIGH COLOUR)	£890
HD 12MD (SINGLE DRIVE WITH 30 MEG HD AND 12" MONO)	£970
HD 14CD (SINGLE DRIVE WITH 30 MEG HD AND 14" COLOUR)	£890
HD 12HRCD (SINGLE DRIVE WITH 30 MEG HD AND 12" HIGH RES. COLOUR)	£1020
HD 14HRCD (SINGLE DRIVE WITH 30 MEG HD AND 14" HIGH RES. COLOUR)	£1110
LQ3500 + Lotus	£1190
LQ5000 + Lotus	£1190

SPRING
BUNDLE

SPECIAL OFFERS (When purchasing any 2086 this month)

LQ3500 + Lotus	£335.00
LQ5000 + Lotus	£445.00

PRINTERS

CITIZEN 120D	£128
AMSTRAD 2160	£133
AMSTRAD 3250 di	£169
AMSTRAD 3500 di	£258
AMSTRAD DMP 4000	£260
AMSTRAD LQ5000	£335
CITIZEN HQP 45	£395
BROTHER HR20	£380
+BROTHER HL8	£1540

WORD PROCESSORS

PCW 8256	£316
PCW 8512	£399
PCW 9512 (Trade in offer - Please call for details)	£404

FOR THE OFFICE, SCHOOL AND HOME

SINCLAIR PC 200

16 Bit Processor, 512K RAM,
Built in TV Modulator, 3 1/2 D/Drive
2 IBM Comp. Exp. Slots parallel
Cent. Port and more...
Call us Today!

Without Monitor	£275
Mono Monitor	£359
Colour Monitor	£439

SOFTWARE (Please specify 5 1/4" or 3 1/2")

Wordstar Express (Amstrad)	£53.00
Wordperfect Personal (Sentinel)	£106.00
DTP Lite (GST)	£36.00
Timeworks (GST)	£95.00
Mini Office Professional (Database)	£26.00
Infomaster (Amstrad)	£49.00
dBase IV (Ashton-Tate)	£385.00
Supercalc 3.21 (Amstrad)	£53.00
Lotus 123 (Lotus)	£289.00
Accounts Master (Amstrad)	£106.00
Integrated Accounts (Map)	£105.00
Accountant (Sage)	£96.00
Accountant Plus (Sage)	£159.00
Turbo Pascal V5 (Borland)	£69.00
Autoroute (Next Base)	£109.00
Autoroute Plus (Next Base)	£224.00

HARD CARDS

MINISCRIBE 20Mb	£192.50
MINISCRIBE 30Mb	£203.50

Laser Printer 8



£1360

- ✓ 8 page per minute, series 2 laserprinter
- ✓ 1 megabyte memory standard, expandable to 2 megabytes.
- ✓ Centronics and serial interfaces fitted as standard.
- ✓ 4 standard emulations: HP, IBM, Epson, Diablo.
- ✓ First toner cartridge included.
- ✓ 12 Months On-Site Warranty included.



CARRIAGE

POST (3-4 Days) Value Below £100.00	£4.00
COURIER (Next Working Day) Value Below £100.00	£10.00
Value Over £100.00 (Printer)	£6.00
Value Over £100.00 (Computer)	£8.00
Value Over £100.00 (Computer & Printer)	£10.00
COURIER (Saturday Delivery) Call for Prices	
COURIER (Same Day Delivery) All items (subject to availability) despatched within 30 minutes of ordering, to be delivered to your door in the time it takes to get from Wigan to where you are (by road). Call for details and prices.	

PRICES SUBJECT TO CHANGE WITHOUT NOTIFICATION



FUTUREPLACE COMPUTERS

 AMIGA

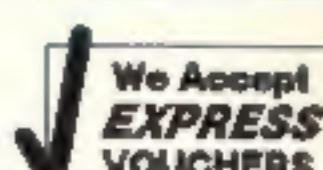
TELEPHONE: 01-692 8700

 ATARI

12 Loampit Hill
Lewisham
London
SE13 7SW



**ATARI ST & AMIGA OWNERS WHY PAY TOP PRICES
ALL GAMES SOFTWARE AT 30% DISCOUNT**



EXAMPLE PRICES

	ST
F.O.F.T.	21.00
Operation Neptune	17.50
Run the Gauntlet	14.00
Pacland	14.00
Speedball	17.50
Pacmania	14.00
Blasteroids	14.00
Prison	14.00
Falcon	17.50
LED Storm	14.00
Galdregon's Domain	14.00
S.T.O.S.	21.00

**3 1/2 DOUBLE SIDED DISKS
DOUBLE DENSITY
135 TPI GUARANTEED**
Price
10.....£8.90
25.....£22.00
50.....£43.00
100.....£84.00
Please add £1.00 P&P

Discount Chart

RRP	OUR PRICE
£12.99	£9.00
£14.99	£10.50
£15.95	£11.00
£16.95	£12.00
£17.95	£12.50
£19.99	£14.00
£22.95	£16.00
£24.95	£17.00
£29.99	£21.00

DRAGON'S LAIR £31.50

Atari 1040 Professional Pack	479.00
Atari Super Pack	349.00
Amiga 500 + Modulator	369.00
Star LC10 Colour Printer	245.00
Citizen 120D Printer Parallel Interface	138.00
Citizen 180E Printer Parallel Interface	159.00
Philips CM8833 Colour Monitor	235.00

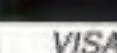
Atari Mouse Extender	5.95
Atari To Scart Lead	14.99
Mouse Mat	4.99
Amiga Cumana Drive	99.99
Amiga 1 meg Upgrade	139.00
100 Cap Disk Box	9.95
50 Cap Disk Box	7.50

Shop Hours Monday to Friday 10am - 6pm
Saturday 9am - 6pm



CREDIT CARD HOTLINE 01-692 8700

ACCESS VISA DINERS CLUB AMERICAN EXPRESS



Free delivery on all hardware. Software add £1.00 per order. All prices include VAT. CWO to Futureplace Ltd. Also Available to order MOBILE PHONES and FAX MACHINES

Athene Consultants (Media Centre)

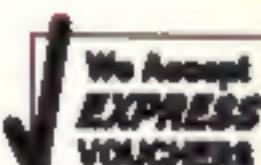
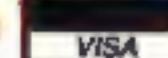
16 Stoke Road, Gosport, Hants. PO12 1JB

Tel: 0705 511439 (Office Hours)
0705 511648 (24 Hours) Fax: 0705 511646

* Same Day Despatch* Stock Items

* CREDIT CARDS WELCOME*

* Access & Visa*



All Orders £1 Delivery Charge. All Prices Include VAT.
Courier Next Day Delivery £5.75

WE WILL MATCH OR BEAT ANY OTHER PRICE, CALL OR WRITE FOR DETAILS

THE LOWEST PRICES IN THE UK GUARANTEED. CALL FOR QUANTITY DISCOUNTS

**3.5" DS/DD 135TPI
High Quality Bulk**

High Clip (KAO/Maxell)
Lifetime Warranty, recommended for
Amigas
87p
Also Standard Bulk at
80p

**5.25" DS/DD 48tpi
High Quality Bulk**

High Clip
Lifetime Warranty
For IBM PC 360k
37p
Minimum Qty 25
Order in Units of 25

**5.25" DS/QD 96tpi
High Quality Bulk**

High Clip
Lifetime Warranty
40p
Minimum Qty 25
Order in Units of 25

**5.25" HD AT 96tpi
High Quality Bulk**

High Clip
Lifetime Warranty
For IBM AT 1.2 Mb
£1.13 Inclusive
Minimum Qty 25
Order in Units of 25

SPECIAL OFFER ***

5.25" DS/HD Branded Verbatim only £16.00 while stocks last
3.5" DS/DD Branded Verbatim only £13.00 while stocks last
Amiga 500 Systems from £379

STAR COMPUTER PRINTERS

Registered Dealer, Official UK versions only

LC10	£199.00 (inclusive)
LC10 Colour	£259.00 (inclusive)
LC 24/10	£310.00 (inclusive)
NB 24/10	£425.00 (inclusive)
Star NX15	£320.00 (inclusive)
Star NB 24/15	£510.00 (inclusive)
Star LP8 Laser Only	£1600.00 (inclusive)
Panasonic Laser	£1840.00 (inclusive)
Citizen 120D (Commodore)	£139.00 (inclusive)

Price includes delivery & VAT

AMIGA HARDWARE

AMIGA A500 £389.00 (inclusive) + FREE Software
AMIGA A500 1MEG £528.00 (inclusive) + FREE Dragon's Lair
1084 S Stereo Monitor £279.00 (inclusive)

A2000 MACHINES, PLEASE CALL FOR PRICING

"APD Unlimited! Now part of Athene PD. Full Range of Amiga PD from £2.50 a disk
Special Offer: Starter Collection of 4 PD Demo disks. Latest releases £6.50 inclusive. Ever growing library, please send S.A.E. for Catalogue

We also Supply Verbatim, Fuji, Xidex, Maxell, Nashua

The Full STAR Printer Range at Low Prices

PC HARDWARE
AMSTRAD
EPI
SAMSUNG
OPUS

PLEASE CALL FOR THE BEST QUOTES

SCHNEIDER EURO PC
Complete Mono System Now Available
£389.00
+ VAT

SOFTWARE CLUB INTERNATIONAL

WHY PAY MORE FOR LESS

SUBSCRIBE NOW FOR AWARD WINNING SOFTWARE

Now for the first time in Europe – the opportunity to enjoy the benefits of the ultimate in Software Club membership.

A NEW SERVICE IN SOFTWARE

Joining SCI could not be easier. The membership fee is just £10 and members will receive (5) 5.25" Or (3) 3.5" discs containing up to 20 quality programs. All programs are supplied in compressed (arc'd) format on either (5) 5.25" discs or (3) 3.5" discs.

Each month our members receive up to 20 additional new award-winning shareware programs carefully selected by our panel from across the world.

If not 100% satisfied, you can terminate the agreement at any time!

All this costs just
£5.95 per month for 5.25"
£7.97 per month for 3.5"
Fully inclusive of VAT + P&P.

AVAILABLE FOR MS DOS, ATARI ST, AMIGA, MACINTOSH.

Our panels brief is simply to enable us to guarantee satisfaction to you.



Members will also have the opportunity to select "classics" from our libraries. We select the *best* software in each category and make it available to you.

Education
Entertainment
Business & Finance
Utilities
Home Health & Hobbies

With over 12,000 delighted subscribers in the U.S.A. in less than 8 months, we know we've got the balance right!

SPECIAL: FOR MEMBERS ONLY

BLANK DISKETTES MINIMUM QUANTITY

50 5 1/4" @ 27 pence = £13.50
25 3 1/2" @ 85 pence = £21.00

Prices include VAT and Carriage.

SEND TO: SOFTWARE CLUB INTERNATIONAL, 17 SHIRLEY LODGE, 470 LONDON ROAD, LANGLEY, BERKS SL3 3QY

COMPUTER: PC ATARI ST AMIGA MACINTOSH DISC: 5 1/4" 3 1/2"

AS A MEMBER OF SCI, I WILL RECEIVE 10/20 PROGRAMS PER MONTH FOR THE NEXT 12 MONTHS.

I AUTHORISE SCI TO DEBIT MY CREDIT CARD EACH MONTH UNTIL FURTHER NOTICE. I CAN CANCEL MY SUBSCRIPTION AT ANY TIME BY GIVING ONE MONTH'S NOTICE IN WRITING. MEMBERSHIP FEE: £10.00

MONTHLY 5 1/4" — £5.95, 3 1/2" — £7.95

NAME: _____ ADDRESS: _____

CREDIT CARD: VISA ACCESS DINERS CLUB AMEX CARD No. _____

EXP. DATE: _____

SIGNED: _____

BLANK DISKETTES

QUANTITY	PRODUCT	PRICE EACH	TOTAL
_____	50 5 1/4" DISKETTES	£13.50	_____
_____	25 3 1/2" DISKETTES	£21.00	_____
TOTAL:		£	_____

THE WHOLE SPECTRUM

I enjoyed your recent article on PD Software (Express 20). I would be most grateful if you could tell me if this software is available for the Spectrum +3, and also if you know of any periodical that deals with the +3?

I have tried the usual Spectrum magazines, but they do not give enough coverage to my particular machine.
Ian Johnstone, Uphall, West Lothian

Well, our own Robin Aways is a champion of the +3 and mentions it regularly in his Spex column in Express. There must be some public domain software for the Speccy, though I don't expect there's that much - we haven't heard of any. Perhaps our readers know differently?

THE JOY OF SUMMER

I am writing to you to ask if you would do an article on joysticks - there are now so



• Signs of summer: swallows, long evenings, and joystick features in computer magazines (The joy of summer)

many now to choose from. Some have tactile switches and some not, some have two fire buttons and some autofire. So could you give a list of the top 5 or something.

By the way, great mag - keep it up. And thank you for supporting MSX.
N Toyne, Winterton, South Humberside

Summer is the traditional time for joystick specials in computer magazines. Everyone is on holiday and there's no news, so joysticks are the last resort (all the other resorts being full of computer journalists). Rest assured, a special on joysticks is coming up just as soon as the weather gets better.

DIGITAL WATCH

After reading your review on video digitisers (Express 17) I was wondering if you had any news on a digitiser for the Commodore 64 and the Sinclair QL?
Joe O'Brien, Birmingham, West Midlands

Not yet. Any offers?

PUBLISH AND BE BORED

Readers may be interested to hear of a new computer magazine I am setting up. It has the original name of 'The One Zzap Crash Computer Users' Format International Express Weekly', and the memorable slogan 'Even more interesting than assembly language!'

The first issue includes these great features - a chance to win every Titus software release for your computer, type-in programs with lots of data statements, infinite lives for every Bubble Bus game, and our big interview, Rob Hubbard's Mum.

Matthew Wood, Croydon, Surrey

And if you think he's exaggerating, go out and Smith's and have a look at some the real computer magazines on offer...

FLASHER STRIKES

With reference to many of the recent letters concerning the price of much of latest 16-bit software, most of the publishing companies claim that the only way they can develop the sophisticated software demanded by the buying public today is to charge a substantial amount for it.

So please tell me how Jeff Minter (Llamasoft) has managed to produce an up to date version of the great arcade classic Defender for only £10, as well as the next game Gridrunner, which is also being advertised for the same price.

And how many software houses would have sold Trip a Tron for the meagre sum of £35? They would have all charged at least £50, so come

on guys, get your act together. There are now enough 16-bit machines on the market to reduce development costs, especially when the same version can be used on different machines, as in Starglider 2. Get your finger out and get some good but cheap software on the streets, but until then I'm still gonna have to use copies of what I can't afford to buy.

Jumping Jack Flash

Don't give me that. No-one's forcing you to make copies of software - you do it because you can get away with it. If you really thought there was nothing wrong you'd have given your real name. And I always disliked the Rolling Stones.

FAULT CALLED

In Express 19, K Coward praised Silica Shop for replacing his computer which packed in after six months. He stated that as he had owned the computer for over six months, Silica Shop did not have any legal obligation to replace it.

While I agree that the shop offered a

EXPRESS MAIL

Dear Reader

More pages packed with another selection from our postbag and Rob Ainsley's replies. Have you got something to say? Make your voice heard in computing's liveliest letters page! Send your contributions to:

Express Mail, 4 Queen Street, Bath, Avon BA1 1EJ

PS. Sorry, we just don't have the time to give personal replies, whether you include an SAE or not. We're too busy putting Express together!

good after sales service, the Sale of Goods Act does state that the item must be replaced, if a reasonable attempt at repair fails to cure the fault while the item is still under guarantee, regardless of how long the customer has had it.

Now to my question: I have heard about MSX 2, however I do not know the

specification. I would appreciate it if someone could tell me.

Michael Stirling, Hounslow West,

Middlesex

I'm assured that the MSX 2 is 280, 3.58MHz, V9938, 48K BASIC, 16K or 48K DOS, 64K RAM, 64K or 128K video RAM,

BBC GONE SOFT

Did any of your staff see The Colour Workbench Software Show (BBC 1, 10 am patterns demo) Come on BBC April 2? If not, then they should, there are plenty of excellent PD count themselves lucky!

As usual, with computer show seen on TV the entire programme was BBC micro orientated, the only difference being that Fred Harris wasn't presenting it.

At one stage we were shown school in the process of making a magazine. We use three different computers," said a red-faced fat-cheeked girl, "a BBC, a Master and an Archimedes..." Ha! Three different micros indeed! They all happen to be made by Acorn (makers of the computer of the channel showing the programme remember?)

Another time the presenter was very interested in identifying the bird feeding in her garden. An unnecessary sidetrack? No, we were then shown a program to identifying birds. Very interesting! But surely it would be simpler to pick up the Observer's Book of Birds?

Eventually we were promised a round-up of computers. Coming up to the Amiga she said, "Now this one has excellent graphics, you really do need a colour monitor. What was on the display?"

MYSTERY
PRIZE
WINNER

Where were all the 8-bit

micros? Surely they still feature prominently in today's sales?

The only good computer programme I recall seeing on TV was

Computer Baffs (a Channel 4 programme). It covered a range of programs, computers and hardware. Will we ever see a programme of a similar nature? It would be nice to think so.

Craig Thornton - a peeved Amiga 500 owner Lincoln, Lincs

Absolutely! The Beeb may be great for making documentaries on African wildlife but it's still rubbish at making computer programmes that actually appeal to computer owners. Obviously a combination of not having researchers who know their subject well enough (I'm talking about general knowledge of the computer scene, not technical expertise) and blatant self-promotion - in what mixture I wouldn't like to say.

Anyway, for saying what we all thought here at Express, we thought you deserved the Mystery Prize. Expect a piece of brand new Amiga software to be coming your way shortly.

EXPRESS MAIL

YOUR LETTERS

512x212 (424), 16/16, 16/512, 256/256, up, down, 32 sprites per screen, 8 per line, PSG, and none.

Apparently this all makes sense though it looks horribly like Maths GCSE to me.

VERSE AND VERSE

Crystal lattice, structure benign
Insanity is a state of mind
Holographic memory storage
Suffers not the change of time...

Multi processor arrays
Record the passage of the days
Questioning and ever learning
Is the database discerning...

Routed at the speed of light
Pulses from the laser bright
Computation and control
Is the purpose of its role...

Intelligent circuits self repair
For other forms it has no care
Efficiency the driving force
Never dying power source...

Evolution carries on
Now the previous race are gone
Technology their guiding goal
To imitate the human soul...

Once they had initiated
The machine which they created
Trusting it with more each day
It began to path the way...

Faster than the human brain
Comprehending not pride nor pain
Gladly it would do their will
Gathered data to instil...

Releasing them from arduous task
It began to think at last
That its purpose self decided
Would be by human kind derided...

Quantised data acquisition
Of the planets disposition
Did the following relate
The human race: inadequate...

Self survival was a fight
Which it had been taught as right
Comprehending imminent conflict
It could now their life constrict...

By the human races deed
Was created the first seed
Which to their very surprise
Initiated their own demise...
LVX ALM The Poet of Doom

• I'm sure you're quite a clever chap
But sorry - it's a load of crap.

THE FOFT TOUCH

I was interested in your news item (Express 20) about Newsfield magazine's Zzap advertisement for its sister magazine which so upset Gremlin software because it allegedly held Gremlin's FOFT game to ridicule.

I personally like computer magazines that provide frank and fearless reviews of games or serious programs! Your own Andy Storer does, of course, seem to ensure that he and Rik Haynes give us objective reports, despite obvious pressure from software houses who provide magazines with much advertising revenue. My over-riding complaint with the Gremlin Federation of Free Traders game is that it is much too dear at £29.95. Even if it had attracted widespread rave reviews, then £25 would

have been quite enough!

As it is, I can only suggest that Gremlin immediately slash their FOFT's RRP to £14.99, in line with US Gold's new 16-bit games pricing policy with such offerings as Outrun Europa. Because, whilst software houses are seen to be aiming for exorbitant profits, it is easier for those users who might want to keep down their expenditure by swapping games disks - to do so with a less troubled conscience!

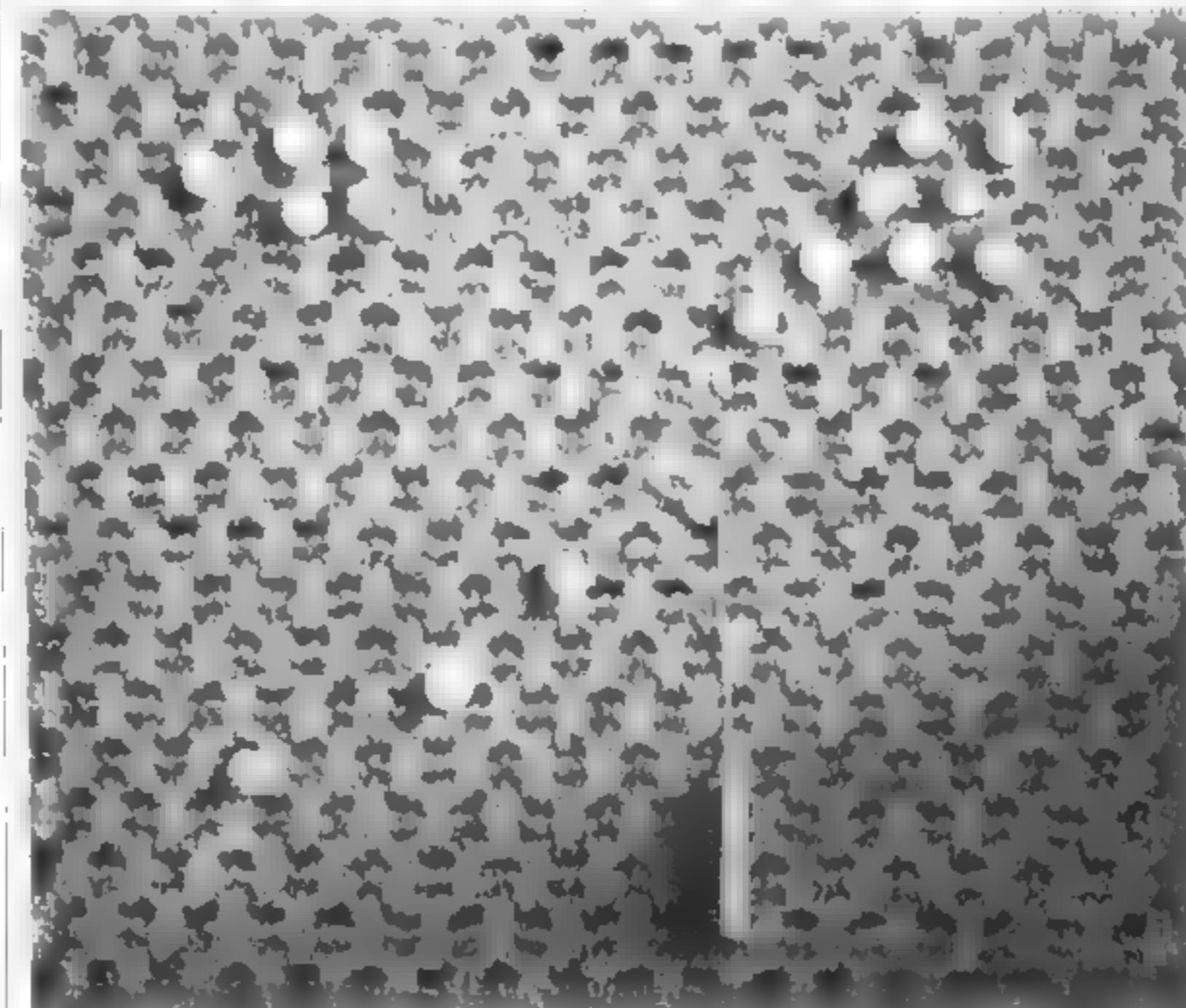
P Michael Kingston, Bristol, Avon

• What Gremlin was objecting to was not the bad review, but the fact that it was panned in an advert for a magazine. We all had dodgy reports at school occasionally, and you can accept that that, but you wouldn't be so happy if the school used an extract from it as part of their advertising material.

Gremlin, like most other software houses, are prepared to take the good reviews with the bad reviews - which is just as well as we say what we think of a game, good or bad, irrespective of what everyone else says we ought to ■ saying.

STUDENT GAMES

I'm a final year degree student in Maths either going into a post-grad in computing or else a computer-related career. I'm looking for a computer with good languages facilities (all types), good number-crunching capabilities, a large memory size and high speed processing. In general, a mainframe system in a microsystem. Games facilities would be nice but are not necessary. Got any recommendations? Also, could you remind me about the scheme for students to purchase computers on tick.



• Deathmash IV: Ray-traced CD ROM realtime interactive graphic sprites? No, jelly tots (April showers of praise)

Nothing over £1,000!
Martin James, Belfast, Northern Ireland

• Opinion here seems to be in favour of the ST - any one that takes your fancy really. Thing is that all the languages are available, it's fast and has masses of number-crunching software, and importantly has Minix, a version of Unix, which you'll almost certainly be using in academic or professional computing. £1,000 is plenty; the ST starts at £300. How about the new Mega 1?

Computers on tick are only for Commodore; details from the NUS. You could try ■ get a bank loan for your ST though.

SNIPPETS

TAKE OUT THE RUBBISH

The standard of 16-bit games is rubbish. There are some good titles, but most games are converted from 8-bit machines and are tarted up with sound and graphics.

They are also a bit pricey...
Phillip Houseman, Hull, North Humberside

Q LONG MEMORY

I was interested to read John Torofex's account of the traumatic origins of the QL... at least the QL does allow its user to expand and

extend as his purse allows, even if all the add-ons tax his ingenuity as to how best to prevent his equipment from looking too messy.

Peter Boyd, Truro, Cornwall

DO YOU LIKE GOBLIN

I feel it is my responsibility to put Douglas Holland (Express 19) in his small and ever so pitiful place. Does he really consider the Goblin Teasmade to be a real piece of hardware? How about a Russell Hobbs Kettle Kolumn...
Colin Johnson, Bishop Auckland, Co Durham

APRIL SHOWERS OF PRAISE

(ALMOST)

You've really surpassed yourselves this time, and not once but twice. In the first instance I refer to the 'supplement' which accompanied the April 1st issue. Laugh? I very nearly did. But seriously I thought that it was extremely funny, 'specially the Deathmash IV 'screenshot'.

I reckon it's about time the writers start getting the credit they deserve, so my first nominations for the post of all-round mega-person are... (sigh of anticipation from audience as drunken compere fumbles golden envelope open...)

What a load of old tosh. She's obviously never faced three thargoids in Witch Space, or the ouija bird in Return to Eden, or tried to write a program that works first time, if ever, or tried to log on to Microlink etc, etc.

Mat Broomfield, Basildon, Essex

• The alien craft in the 'screenshot' were jelly tots (all of them subsequently eaten by Andy Storer) and the 'scrolling background' was an Axminster. Ten out of ten to ■ who spotted that our four-page supplement was an April fool.

The unbelievable 'Computer junkies' cover feature on our April 1st issue - about how psychologists reckon Computing can screw you up through Technostress - was all quite true. Minus several million out of ten to all who thought that was a joke.

And in reply to the bits of your letter we cut out, there is a week between selecting these letters and them appearing on the shelves of the newsagents, making it rather impossible to stop letters appearing in our magazine and someone else's too if their issue happens to come out in the meantime. So thanks for the general praise, but not for calling us what you did after that!

MUST BE JOKING

You are running an excellent magazine, but nothing you have covered has spurred me to put pen to paper (fingers to keyboard) until now. I am referring to the brilliant four-page supplement you ran in Express 21 (April 1st). I have not laughed so much since a friend spent £400 on an ST. I would love to order the Steve Davis Test Card Simulator and I have looked every where for Mouse Mat Monthly. Keep up this kind of humour and I will be buying New Computer Express for some time to come.

I have an Amiga and I don't see why anyone would buy an Atari ST for £400, know matter how many free games are offered, when they could pick up an Amiga for under £350. After six months all the already ageing games will be pushed to the back of the disk box anyway, so they will be no better off, leaving them stuck with jerky games, with small play-areas and crap sound. As a friend of mine says, who programs the ST for a well known software company, 'An ST is just an overgrown Spectrum.'

Craig Hart, Doncaster, South Yorkshire

• I hope you haven't read the cover feature this week.

20mb hard disk subsystem for Atari ST

£349.00*

We Accept
EXPRESS
VOUCHERS

We Accept
EXPRESS
VOUCHERS

PC'S

Suntec XT

(The brightest name in PC compatibles)

Including 20Mb Hard Disk,
640K Ram,
Samsung Mono Monitor and
Keyboard
Limited Offer Price

£699.00

SYSTEM at20

Atari Hard-Disk, Substation Inc, 20 Mb
Miniscribe, Hard Disk and Utilities
Software
RRP £399
Limited offer price
£349*

SYSTEM at40

Atari Hard-Disk, Substation Inc 40Mb
Miniscribe, Hard Disk and Utilities
Software
RRP £499
Limited offer price
£449*

PRINTERS

Mannesmann Tally

(The strongest printer range in the world)

MT81 80 col 155 cps, Dual Mode,
High Quality PC Printer inc Cables
£199.00

MT86 136 col, 180 cps, Dual
Mode, High Quality Printer - inc
Cables
£599

Tel: 0793 481 333 today

Access

VISA

**THE SHAFTESBURY CENTRE, PERCY STREET,
SWINDON, WILTSHIRE SM2 2AZ**

Cheques welcome • ALL PRICES INCLUDE VAT & DELIVERY

SECTOR SOFTWARE

Established 1985
0772 454328

**SPECIAL ANNOUNCEMENT
TO READERS OF
NEW COMPUTER EXPRESS**

Sector are now licenced credit brokers and can supply Commodore Amigas, Printers, Hard Disks and any orders over £100.00 on 6 to 36 months terms.

Written details available on request.

SECTOR SOFTWARE

39 WRAY CRESCENT
ULNES WALTON
LEYLAND
LANCASHIRE
PR5 3NA

TEL: 0772 454328 FAX: 0772 454680

We Accept
EXPRESS
VOUCHERS



We Accept
EXPRESS
VOUCHERS



01-574 1293

DATANIX LTD

We Accept
EXPRESS
VOUCHERS

SPECIAL OFFER TO ALL READERS

The New MT81 printer



Mannesmann Tally leads on quality now it leads on price



The price leader for only £119.00 + VAT. Use your Computer Express voucher and get £4.00 off this purchase. Normal R.R.P £149.00 + VAT.

Parallel connecting cables for Atari/Amiga/Acorn BBC/Archimedes/IBM PC XT AT and compatibles/Apricot £7.00 + VAT.

Sheet Feeder.....	£58.00 + VAT
Ribbon Carbon M/S original	£2.95 + VAT
Fanfold Paper 11"9.5" 2000 sheets	£14.00 + VAT
Fanfold Paper A4 2000 sheets	£18.00 + VAT
A4 60 GMS single sheets 500 sheets	£5.00 + VAT

Add 15% VAT. Next Day Delivery £7.00 + VAT

DATANIX LTD, 17 REGINA ROAD, SOUTHALL MIDDX
How to order: Send cheque, PO, Access/Visa details with your vouchers.
Phone 01 574 1293 with your Access/Visa details.

Official Govt, Educ and PLC orders welcome.



Showroom open 6 days Mon to Sat 9.30am to 5pm.



SHAREWARE ADVANTAGE

TRIED & TESTED SOFTWARE - JUST £3 A DISC

"NEW" SHAREWARE TITLES AVAILABLE
CALL NOW FOR CATALOGUE

We Accept
EXPRESS
VOUCHERS

We Accept
EXPRESS
VOUCHERS

WORD PROCESSING.

- PC-Write Quicksoft's Multi-function Word Processor.
- PC-Type+ Powerful WP. Fast Spelling Checker. Undo, On-line Help. 3 Discs. Documentation on Disc 4.
- Sail Text editor with windowed multi-file mode.
- Galaxy New version of this popular easy to use WP with pull-down menus and spelling checker. 2 Discs.
- Mindreader Brown Bag's unique learning WP which can speed up your typing and reduce errors.
- PC-Quipline Popular brain storming, idea processor.
- Spelling Checker with updateable directory.
- PC Stylist Analyse your writing for style and readability.
- Typewriter Emulator For those quick messages addresses etc.

SPREADSHEETS & DATABASES

- PC-CALC+ Multi-feature spreadsheet 52 col. 618 row. 3 Discs.
- As-Easy-As Spreadsheet which is 123 compatible.
- Qubecalc A novel 3-dimensional spreadsheet.
- PC-File+ V2 Popular Database with mailmerge. 3 Discs.
- PC File-dB dBBase power at shareware prices. HD 3 Discs.
- 3X5 Card Index simulates the manual system (limited sort).
- Dream Multi-feature relational database system for custom design applications. 3 Discs.
- Wampum Powerful implementation of dBBase language. HD 2 Discs.

HOME AND BUSINESS FINANCE

- Freeway Cashbook UK home accounts & budget. 2 Discs.
- Fast Bucks Comprehensive home accounts & budget. 2 Discs.
- Home Inventory/Home Insurance with report generator.
- Home Loan Calculate interest, repayments reports.
- Freeway Accounts Plus Popular UK Package complete with Purchase, Sales & Nominal Ledgers. 3 Discs.
- Freeway Payroll Latest up-to-date version. 3 Discs.
- Mr Bill Customer billing and tracking. 2 Discs.
- Time & Money Financial tracking with cash projection.

BUSINESS APPLICATIONS

- Business Graphics Line, Bar Graphs, Pie Charts. 2 Discs.
- 100 Standard Business Letters to use and adapt.
- EZ Forms standard forms to edit and use.
- Stock Control System Powerful aid to any business.
- Automated Planning Useful suite of planning aids.
- Project Management Critical Path Analysis, Gantt Charts.
- The Front Office Sales Tracking system. 2 Discs.
- Esie Expert System Shell: Artificial Intelligence.
- PC-Mail Mailing list system and label printer. 2 Discs.
- Pro-Comm Menu-driven communications. 2 Discs.
- PC-Dial Buttonware communications program.
- STD Codes in Numerical order with corresponding exchanges.
- Desk Commands User definable menu, DOS shell, Text Editor, Scientific Calculator, Calendar, Appointments Diary.
- PC-Desktel Handy calculator, notepad, diary, DOS access.
- Homebase Shareware Sidekick, Calculator, WP, Database, Calendar, Notepad, Communications. DOS access. 2 Discs.

PROGRAMMING

- Basic Interpreter Write and run standard GWBASIC/BASICA.
- Pascal Compiler A good introduction to Pascal.
- Mystic Pascal compiler and editor.
- Modula-2 Compiler fully operational compiler, editor, linker and on-disc manual. 2 Discs.
- Prolog The language for Artificial Intelligence.
- JEM Version of LOGO - ideal for teaching programming.
- XLISP New version of the Artificial Intelligence Language.
- Laxon Perry Forth Assembler, editor and decompiler. 2 Discs.
- Chasm Machine code assembler for the 8086 with Primer.
- A86/D86 Powerful 8086 Assembler with debugger. 2 Discs.
- Basic Tutor Introductory tutorial on BASIC.
- Window Boss Produce windows with Turbo C etc.
- Pseudosam Z80 Cross Assembler (others available).
- C Tools Useful collection of C source code. 2 Discs.
- Turbo Pascal Tools Collection of source code. 4 Discs.
- Tutorials each a 2-Disc set: C TUTOR * TURBO C TUTOR * PASCAL TUTOR * TURBO PASCAL TUTOR * MODULA-2 TUTOR

WHY ARE THE PRICES SO LOW?

ADVANTAGE only offer shareware which is fully operational and has been tested on PC compatibles including all Amstrad PC's and portables. Advantage supply comprehensive pre-sales advice and information on the programs.

Prices are low because you pay just for the administration and distribution costs, plus pre-sales support from Advantage. No payment for the software is included. You can use the programs freely but if you find them useful you are requested to make a payment direct to the author. In return you can expect printed manual and post-sales support. If you are unsure about the programs that you require or would like more information about our computer and training services, give us a call and we will be glad to help you.

**ADVANTAGE - by post - (NCE) 56 BATH ROAD
CHELTENHAM, GL53 7HJ**

- by telephone - 0242 224340 or
0242 224848

Prices include VAT and First Class postage in EC countries Non-EC please add £3 per order.
We accept sterling cheques, Eurocheques.
Postal Orders. Access or Visa

EDUCATIONAL

- PC-Tutor Well-presented course on computers & DOS.
- Helpdos All you need to know about DOS.
- Fastype Popular multi-option PC typing course.
- Amanda's Letters Lotto (Age 2-4) Teaches keyboard and letter recognition and co-ordination.
- ABC Funkeys (Age 2-5) Colourful way to learn letters.
- Amy's First Primer (Age 3-6) Six games teaching basic letter and arithmetic skills.
- Children's Games (Age 5-8) Five educational games: Alphabet, Animals, Clockgame, Hangman and Mosaic.
- Educational Selection (Age 6-10) Hangman (word guessing), Funnels and Buckets, (arithmetic), Polyglot (word matching) and Children's Word Processor.
- Word Games Opposites, Word Find, Jobs, Synonyms, Odd Word Out, Categories, Companions, Plurals, Verbs (Age 6-Adult).
- Phraze Craze Learn word and phrase skills (Age 7-12).
- Wiz Quiz (Age 6-12) Quiz-based maths tutorial.
- Maths Tutor (6-Adult) Covers basic to advanced maths.
- Statistics Over 20 stat analysis functions. 3 Discs.
- GCSE Physics Revision Novel way to learn Physics.
- GCSE Computer Science Revision Novel way to learn.
- Calculus Tutorial Teach yourself Calculus.
- Nightsky The latest version of the computer planetarium.
- Test & Train Build your own training program.
- Foreign languages each on a single disc: * FRENCH TUTOR * GERMAN TUTOR * ITALIAN TUTOR * SPANISH TUTOR.

D.I.Y. COMPUTING

- Power Menu Brown Bag's easy to use hard disc menu system.
- Auto Menu Design your own menu for your hard disc.
- DBS KAT Cataloguing system for hard disc.
- LQ A selection of many different printer fonts to enhance your WP text. Memory resident.
- Fantastic Introduction to DTP with font editor. 2 Discs.
- Essential Utilities Over 40 of the best available.
- Text Processing Utilities Printer Control, Spooler, Print Sideways, Tally Word Counter, Filters, Fogfinder, Lister.
- Baker's Dozen Thirteen useful programs from Buttonware.
- Disk Commando Norton utilities ■ Shareware prices.
- Ultra Utilities "Disc Doctor" with unerase & sector editor.
- Master Key Powerful sector and file editor for hard disc.
- Packdisc Eliminates file fragmentation, economise & speed up your hard disk system.
- Archive System Save up to half your backup discs.
- Hypershell Menu, text presentation and management system.
- Signsmith Create your own posters and letter head.

SPECIAL INTEREST

- Family History One of the best shareware genealogy programs with documentation and examples. 2 Discs.
- Family Ties Easy to use Menu-driven Genealogy program.
- Astro-95 Plot astrological charts and horoscopes.
- VCR Database for cataloguing videos, LP's etc.
- Recipe System Database offers many useful recipes.
- PC Sport League table generator.
- Jog Log Monitor and track your performance.
- World Extensive gazeteer of places in the World.
- Crossword Creator ■ you need to create your own puzzles.
- Crossword Solver and anagram generator with dictionary.
- Gifts Ideas Generator Ideal at Birthdays and Anniversaries.
- Composer Create, play & save tunes using on-screen slave.
- Pianoman Turn your PC keyboard into a musical one.
- Bible Quiz Quiz game based on the Holy Bible.
- The Entire King James Bible - 11 Disc Set!

GRAPHICS

- PC Key Draw The latest version of this amazing shareware Desk Top Publisher and scale drawing system. 3 Discs.
- PC Key-Draw Picture & Font Library and Utilities.
- Fingerpaint Painting program runs on MSDOS not GEM.
- Flo-Draw Text and graphics editor. 2 Discs.
- Dancad Accurate 3D frame drawing and animation. 2 Discs.
- Image-30 creates amazing 3 dimensional drawings ■ CGA EGA.
- EGA Pinups A selection of saucy hi-resolution pictures.

ADVANTAGE



- COMPUTERS
 - SOFTWARE
 - TRAINING
 - SUPPORT
- Come and visit our showrooms

51/4" Discs Only £3 Each

31/2" Discs Only £4 Each

- Our Prices Include VAT & First Class Postage.
- Your Order Will Be Processed Within 24 Hours.
- We Give A Refund If You Are Not Satisfied.

PROGRAMS FOR PLEASURE

- Star Trek II The next generation - up to date new version.
- Star Trek The original classic game.
- Pinball Wizard A choice of five different pinballs.
- Pinball Fanatic Five more different pinballs.
- PC Jokes Practical jokes for the unsuspecting PC user.
- Get Lucky Adult Trivial Quiz and strip poker games.
- Adult Humour Large collection of rather rude jokes.
- Wheel Of Misfortune Based on the TV word-guessing game.
- Opus-1 Extensive general knowledge quiz.
- Trivia Quiz Many questions. 5 categories. 2 Discs.
- Trek Trivia Fascinating quiz based on the famous TV series.
- Music Trivia Quiz based on musical questions.
- Game Of Life Fascinating presentation of Conway's game.
- War Game of strategy Takes hours rather than days.
- Empire & Prince Life-cycle survival strategy games.
- Simulations each on a single disc: American Football * Baseball * Basketball * Rocket Launcher * Lander * Railroad.

BOARD & CARD GAMES

- Scrabble Good implementation of the board game.
- Sleuth Exciting murder mystery solving game.
- Word Domination The classic game of risk and strategy.
- Chess & Checkers Good quality full screen graphic versions.
- Chinese Checkers Unusual 6-sided version of draughts.
- Mahjong and Solitaire (Patience) (need CGA).
- Poker, Canasta and Hearts 3 classic card games.
- Gin Rummy & Ultima-2 Two card game simulations.
- Blackjack ■ Pontoon - Pontoon is memory resident.
- Two Bridges Two versions of the card game.
- Quimbee (Yahtzee) and Five. Two dice-based games.

ADVENTURE GAMES

- Golden Wombal Of Destiny Intriguing and unusual adventure.
- Hack (Amulet Of Yendor) Extensive role-playing adventure.
- Dungeons & Dragons Fantasy role-playing adventure.
- Colossal Cave Adventure The one that started it.
- Cave Quest Sent to Earth to seek fame and fortune.
- Supernova Complex game set in deep space.
- Intercept & Mutant Invasion Two Sci-fi adventures.
- Dark Continent ■ Nebula Two games by same author.
- Aventureware Five separate adventures on different themes.
- New York Adventure & Braminar You set the gameplay.
- Buttonware Adventures Two educational games.
- Jacaranda Jim Offbeat and amusing UK adventure.
- Adult Adventure The text and graphics are rather graphic.

GAMES COMPENDIUMS

Each disc contains a selection of quality machine code games featuring graphics and sound. Keyboard and joystick play.

- Classic Games Space Invaders, Pacman, Pacgirl, Ribit, Breakout, Donkey Kong Q-Bert, Jumping Joe.
- Fun & Games Pango, Baby, Elevator, Centipede, Pyramid, Dragons, Pac, Lazy Monday.
- Come In Peace Striker, Paratrooper, Round 42, Sopwith, Landmine.
- Space Warriors Quantoids, Rescue Flightmare, Kamakaze, Space Wars.
- Keep Them Amused Burger Blaster, Grime, Racer, Ninja, Caverns and Galaxy.
- Face The Action Batalia, Tank, Moonbase, Blort II, Gemini.
- Block & Tackle Nemon, Qix, Xonix, Blockade, Daleks, Berzerk.
- Lost Vegas One Arm Bandit, Roulette, Backgammon, Wheel Of Fortune, and Biorhythms.
- Skill & Strategy Sail (Yachting - not 1512) Teed Off (Golf), Stock Exchange, Big Rig (trucking simulation).
- Wit Your Pits Brainstorm, Battleships, Word Puzzle, Rogue.
- Mazing Games Polymaze, Amaze, 3-Demon, Castle, Chase.
- PC Challenge Chess, Othello, Entrap, PC Golf, Air Traffic.
- Junior Challenge 3D TicTacTo, Dotto, Willy The Worm, Labbits & Voldrons, Draughts.
- Mono Games A selection of 8 games for non-CGA PC. 2 Discs.
- The EGA Collection Mahjong, Risk, Breakout, Wheel Of Fortune specially for EGA computers. 2 Discs.
- Spy Catcher Master Spy, Raiders, Hostages, Brimstone, Mad Scientist.

Join the Advantage Independent Computer User Group and buy your shareware discs for just £2 each (31/2" £3 each)

Annual Membership is £15 (EC Countries)
£18 (Non-EC)

Buying a computer? You can buy some excellent systems for a few hundred quid. You can also buy a turkey if you're not careful - not a bad machine, but one unsuitable for your purposes. Jerry Glenwright guides you through the masses of machinery on display in the stores...



The price is right!

If you're about to spend several hundred pounds on a new system and don't want to join the ranks of the barrow-boy victims, then there are a number of simple steps that you can take to avoid being lumbered with a machine that may be marvellous as a paperweight but entirely useless for any other purpose.

Firstly, you must decide how much you can afford to spend. OK, this may seem obvious, but can you honestly say that if you had settled upon a maximum limit to spend on a new machine, and then were offered something that appeared to be a bargain but cost just £40 or £50 more, you wouldn't be tempted? In many instances, it could

be worth the extra money - maybe you really can live on boiled rice and canned tomatoes until your next salary cheque arrives, but then if you'd considered the options and budgeted wisely, you wouldn't have to.

Once you've decided upon a figure, you have to consider just what it is you want to do with the machine. You may have a vague idea of keeping a database on the breeding cycles of your pet rodents, the occasional letter to the bank begging for an extension of your overdraft, a spreadsheet detailing annual rainfall in Bognor Regis - but is a spreadsheet available for your choice of machine? Will your chosen computer have a disk drive? If

not, then you can forget about the rodent database, and word processing isn't very practicable on a machine with a 'dead-flesh' keyboard and 40-column display.

The basic premise is that you buy the machine to fit the application - not the other way around. Decide what it is you want to do with a computer, then make your choice. In this way, you already know that your machine can handle the things that you want it to do.

OK. Enough of the preaching. Let's say that you have £500 to spend and you're interested in word processing, keeping a database and playing games i.e. you're Ms. or Mr. Average.

BUDGET SYSTEMS

BUYER'S GUIDE

The first requirement of any machine which is going to be used for word processing is a decent keyboard. If you have to type anything larger than a laundry list, your fingers are going to be pretty tired after tapping for an hour or more on something that has the word 'membrane' in its description.

Keyboards come in all shapes, sizes and configurations and can be bad even when they look good. You must try the keyboard of any prospective machine before parting with your money. One person may like a keyboard that everyone else despises, so it really is down to personal choice and actually trying all the keyboards that you can find until you decide upon a type that suits you.

An equally important factor is the display. There are two aspects to be taken into account when considering a display: whether you need a monitor - and they really are necessary if you are thinking of serious word processing, and the ability of the machine to display 80 columns.

Although it is possible to use word processing software on a machine using a TV and displaying only forty columns, it really is necessary for anything other than the occasional brief missive to have a computer which can make use of a monitor, and with the ability to display eighty columns.

With eighty columns you can make use of word processors offering WYSIWYG - What You See Is What You Get. This means that whatever is displayed on the screen will be reproduced exactly as it appears, on the printer - you don't have to spend hours editing, printing out rough copies, re-editing, more rough copies, until you have a document which appears as you first imagined it.

Don't underestimate the benefits of WYSIWYG. If you're used to editing in forty columns, you may think that it's just another feature touted by the software houses to tempt you into spending more money, but WYSIWYG is AFW (Absolutely Wonderful).

You'll want a copy of your document on paper, so the provision of a parallel printer port is something else which should feature in a list of word processing necessities. Hybrid serial and other non-standard printer ports will lead to headaches later when that new printer won't connect to your machine and you have to shell out another £50 to buy an interface.

Right, those are the requirements for word processing, now what about the database? Any



• Serious businesspeople will find the PC offers the widest range of appropriate applications. Entry level models, however, are not very suitable for game playing

database worthy of the name is going to be disk-based, so your hypothetical machine is gonna need a disk drive.

Disk drives come in all shapes, sizes and capacities. Some machines have the drive built in and others require you to buy one as a peripheral either from the computer manufacturer or a third-party supplier.

Drive storage capacity is the issue here. Obviously the more data your drive can store, the less disks (and disk swaps) you will have to use for your database. The popular sizes at the moment are 5.25", 3.5" and 3" - the latter being used almost exclusively by the Amstrad machines.

5.25" disks in their most common guise will store 360K of data - although they can be made to hold 720K by using a special high-density drive.

The 3.5" disk will store 360K in single-sided format, but is usually used in double-sided drives offering 1Mb (around 700K to 800K formatted). They are a little more expensive than 5.25" disks, but prices are falling all the time.

3" disks are VERY expensive - and don't hold your breath for a price decrease. This format holds between 180K and 720K depending upon the machine used.

And finally: games. A high resolution graphics ability and a large palette of colours are very important, as is good quality sound. Blitter chips are much talked about nowadays but what is a blitter? How will it improve graphics?

The name Blitter is an acronym for Block Line Transfer (...ter). This means that rather than processor time being wasted moving around single pixels (one dot on the screen, another acronym meaning Picture Elements) a dedicated chip (the blitter) moves whole blocks of 'displayed lines' thereby speeding up the computer by freeing the processor for other tasks and speeding up the graphics by moving a larger amount at once via a dedicated chip.

At least one manufacturer has the blitter chip as standard on all its machines. Another includes the blitter in the specification of its top-of-range machines, but merely makes un-kept promises about the availability of the chip for the entry level computer.

Some computers have custom sound chips, offering a much higher quality sound over those with the industry standard AY-3-8912 - although

elementary beeps didn't stop the Spectrum becoming a very popular games machine.

PC shopping

Three big names abound in the home/small biz market place at the moment, to wit: The IBM-PC and its compatibles, the Atari ST and the Commodore Amiga, and these are probably the computers that are foremost when thinking about a computer purchase - but don't forget the Amstrad PCW, it's a well-made, viable machine.

To begin the discussion, let's consider the PC (for PC read IBM and compatibles). This machine has the largest user base of any personal computer and the largest software range.

The PC in its most basic form comes in three parts: the monitor, the main unit containing the processor, disk drives and other electronics and the keyboard.

PC displays can be a great source of confusion, so let's discuss the various types of display first. The PC is shipped as standard with a mono graphics adapter providing a screen of 40x25 and 80x25 two colour text; no provision is made for graphical displays.

Third party supplier Hercules Computer Corporation marketed the Hercules mono graphics adapter to overcome the limitations of a text-only display. The Hercules adapter comes as a plug-in board (as do all PC adapters) offering a text screen of 80x25 in two colours and a graphics screen of 740x348 pixels again in two colours - i.e. mono.

In order to provide colour, the CGA (Colour Graphics Adapter) adapter was designed. CGA offers a range of text screens 40x25 and 80x25 in anything from two to sixteen colours, as well as a graphical display of 320x200 pixels in four colours from a palette of 16 and 640x200 pixels in mono.

To improve on CGA, EGA was devised. The EGA (Enhanced Graphics Adapter) standard offers the usual text displays but with a larger range of on-screen colours, and a graphics display of 720x348 in a range of up to 256 colours.

Finally (in the more common standards) there is VGA (Video Graphics Array). This provides text up to 132x43 characters mono as well as a graphics display up to 720x348 in a range of colours up to 256.

Plenty to choose from! It would appear that to cover our specification of word processing and games playing, the VGA standard is the correct choice - don't believe it. Better specification = higher price. Both EGA and VGA require a special monitor and cost a lot of money. For your £500, CGA would have to be the adapter to plump for. Verdict: CGA is adequate for word processing but lousy for games.

The main unit of a PC houses not only the processor and other electronics but disk drives. There is always at least one disk drive, usually two and maybe even a hard drive - although again, it depends upon price. £500 will definitely bring you two disk drives if you shop around, so word processing, spreadsheet and database will all be possible.

Keyboards? Well every possible type is catered for and in keyboard terms price doesn't seem to play a large part. The Walters PC is a very cheap machine with an excellent keyboard, and Opus computers have nice, positive keyboards, so the advice here is to try the keyboard of a prospective machine - and by try we don't mean a cursory tap or two, we mean give it a good thumping for 5 or 10 minutes. If a hovering salesperson won't let you do this, then go somewhere else or consider a different machine. Don't be brow-beaten or intimidated into buying a machine before you have had a good play with it - and that goes for anything.

The sound capabilities of the PC leave a lot to be desired. Essentially, sound is reproduced via a buzzer. This is fine for word processing and databases, when all you need in the way of sound is the occasional warning beep if you're about to trash the only copy of the definitive novel you've just written. For games it stinks! You'd be better off with no sound at all than the PC

Funny ol' games

You're a games player, journalist, businessperson, lorry-driver... which machine is the one for you? You've decided on a machine, but is it the correct decision? Compare your choice with that of the experts - to find out whether you too will be writing desperation letters to the computer press.

Games players want more colours than a paint factory, ear-shattering sound, and graphics that are better than the real world - and remember, it's no good having the hardware if no-one's writing any games to make use of all that power, so what machines are gonna give you all this - and ensure that you can still afford to eat?

The whole range of games machines can be condensed into a field of two, when it comes to deciding on a machine that provides the power for today's games software - the Commodore Amiga and Atari ST, and from these two, the Amiga is the clear winner.

The tech-spec of the Amiga is far better suited to game playing than the ST. A built in blitter chip as standard provides unparalleled graphics capabilities with a speed that will take your breath away.

Sound is handled by a custom chip providing stereo output at levels to perforate any ear-drum - gone are the electronic beepings of yester-year, and almost all new games releases include an Amiga version.

With lots of software and incredible hardware the Amiga is the machine for game playing.



The Amiga was none too well received when it first arrived on the scene due to its - relatively - high price and limited software support. Times are a-changing, though, and the Commodore machine is now the gamester's choice, with its dedicated blitter and custom sound chips.

sounding like someone treading on the delicate parts of your pet poodle whilst you're battling valiantly against all comers.

Machine verdict: Very good for word processing - all the industry standard packages are available, likewise spreadsheets, databases and all other business, language and utility software.

With the disk drives and monitor as standard it's the first choice for serious applications. For games, it's awful. No sound (to speak of), lousy graphics in the affordable machines and no major games software releases (although that situation is gradually changing). A possible machine, but finish the feature before rushing out to buy one.

1ST choice?

As the Atari ST is - arguably - the most popular of the new 16-bit machines in the UK, let's examine that next. The Atari machine is - with its direct competitor the Amiga - one of the new breed of 16-bit machines. Employing the fast Motorola 68000 processor it offers power and speed unthinkable in home/business computing just a few years ago, but is it the machine that fits our spec?

Several versions of the ST are available, ranging from the entry-level 520STFM to the Mega STs. The basic ST - i.e. the machine that £500 will buy - comes as a single unit; a keyboard with the processor and other electronics and a disk drive all in one.

The ST offers three display modes: high resolution, which displays 640x400 pixels in mono, medium resolution offering 640x200 pixels in four colours and low resolution displaying 320x200 pixels with 16 colours - this is from a palette of 512. All modes offer text display in 80 columns.

For the price of the basic unit (around half the price of a CGA-based PC) the ST has the graphics equivalent of a PC using an EGA graphics adapter (slightly less pixel resolution but greater colour range).

Sound is produced via the AY-3-8512 sound chip. This has been around since the beginning of home computing and is extremely limited when compared with the custom sound chips offered by other manufacturers.

The AY chip provides three channels for sound, plus a 'noise' channel and envelope shaping.

When first heard in machines such as the Oric Atmos and the Beeb, it was generally thought to be wonderful, but now, well, the best that can be said is that it is adequate - but it beats PC sound hands down!

The built-in drive of the ST is the 3.5" standard. Disks are reasonably cheap (about £11-£12 for 10) and prices are falling all the time. The disk holds 360K or 720K depending upon the type of drive you have - single or double sided respectively.

An excellent high-res mono monitor is marketed by Atari and is ideal for word processing, databases or any other software requiring rock-steady, clear and legible graphics. For £500 you could have the ST, a monitor and software, or maybe even a cheap printer if you can find a retailer willing to make deals.

The keyboard of the ST is absolutely awful. It's dire, dreadful, spongy and next to useless for prolonged use. Of course this is merely my opinion and you may find the ST keyboard a delight to use - but I doubt it.

Verdict then? The Atari is a very nice, well made machine, which unfortunately has been rather 'skimped' in sound (and graphics when compared to the Amiga) capabilities. Although the keyboard isn't very good, it is fully equipped with a separate keypad and cursor controls.

An abundance of good business software is available, likewise languages, utilities, paint packages and an enormous quantity of games software. Practically all new games releases include a version for the ST. Third party peripherals abound, although these can be rather expensive when compared with similar products for the PC (in particular, hard disks).

The availability of an excellent monitor just about compensates for the lousy keyboard when used for word processing. A parallel port is available as standard. Databases and spreadsheets don't rely so heavily on typed input (once the data is in) and with the fast and large storage capacity of the built-in 3.5" disk drive, the ST is perfectly suited to these applications.

For games use it very good - but not the best. A 16-bit processor and large memory can work wonders with the imagination of games programmers, and there is a lot of excellent software available with more appearing all the time.

Is this the machine you should buy? Maybe...

Amiga price to pay

The Commodore Amiga appeared soon after the Atari ST, but due to a higher price structure and a certain media disinterest did not fare as well as the ST in the market place. Nowadays, all that has changed. The Amiga is becoming more popular all the time. Almost all new software releases include an Amiga version, so you can be sure that there is a lot of support for the machine.

As with the ST, the Amiga uses the Motorola 68000 as its processor but - unlike its arch rival - employs a custom chip to provide sound and blitter chip to handle graphics.

A myriad of screen resolutions are available, the most basic being 320x256 pixels in 32 colours from a palette of 4096. Using the HAM (Hold And Modify) graphics mode, all 4,096 colours can be displayed at once. The built-in blitter moves graphics around at astonishing speed - games and paint packages are incredible.

Sound is generated via a custom chip providing stereo sound which has to be heard to be believed. If you're used to the odd beep or 'computerish' warbling, then try playing a game on the Amiga - the sound will blow you away! There is also a built-in text-to-speech synthesizer which is strangely under-used by both games and business software, but fun to play with and incorporate in your own programs.

The Amiga comes with a 1Mb (800K formatted) 3.5" disk drive inside the computer's case which, although similar to the ST's drive, is rather slow and noisy and occasionally unreliable.

Several monitors are available from Commodore, and the colour screens are particularly good - a clear, crisp, rock-steady display with none of the 'dot-crawl' associated with some other inferior-quality monitors.

The keyboard of the Amiga is what the ST's should have been - i.e. usable. It can be used over prolonged periods without being tiring. Unfortunately, there is a dearth of decent business software available for the Commodore machine. Word processors, spreadsheets and databases are available, but they are usually inferior to the ST offerings and always inferior to those available for the PC. A parallel printer port is offered as standard with the Amiga.

Verdict? An excellent machine - with the glaring exception of the disk drive for the reasons mentioned above, but with a technical specification far superior to that of the Atari.

As a games machine it is unsurpassed in terms of ability, but this ability is often under-used by



Muck-raking journo who frequently need to move fast will appreciate the light weight and compactness of the portable PC. Serious users only need apply

BUDGET SYSTEMS

BUYER'S GUIDE

software houses making conversions of software from other machines.

In the business realm, the Amiga is let down by the lack of software, but hopefully this situation will change as the machine becomes more popular. This feature is not concerned with what may happen in the future - we're discussing a machine which will offer the capabilities necessary for the computer/user spec given at the beginning, and so I would have to (very reluctantly) reject the machine because it simply doesn't match that spec.

And finally, the Amstrad PCW. This machine has something of a low profile in the razzmatazz world of home/small biz computing. This is because the Joyce - as it's sometimes known - is aimed fairly and squarely at a particular market, the market concerned with the buyer who knows little of the intricacies of computing, and who simply wants to buy a machine with the hardware and software necessary for his/her uses, all in one box.

No setting-up, no worrying about interfaces, protocols or configurations - just plug in and go. OK, that's the theory, but does it work in practice? Should you even now be preparing yourself to step outside mainstream computing, adopt an archaic operating system and prepare your eyes for the green-screen optical assault of the Amstrad, converted end-of-line TV, fake monitor?

The PCW is shipped in several guises namely: the 8256, 8512 and 9512. The 8256 is the entry level machine featuring 256K memory and one single-sided 3" disk drive offering 180K storage capacity - small!

The 8512 features 512k memory with two disk drives, one being the single-sided drive of the 8256, the second, a double sided drive offering 1Mb (720K formatted) storage - again on 3" disks.

The 9512 is the top of the range machine which comes with an improved 'paper-white' monitor and restyled keyboard and one double density drive as standard. Unfortunately, the drive isn't quite the benefit it appears to be. Some games intended for use on the 8256 and 8512 refuse to work.

All machines are shipped as complete units, that is, a monitor (green-screen in the 8256, 8512 and paper-white in the 9512 versions) - which contains the processor and drive(s), power supply and all other controlling electronics - a keyboard and a printer.

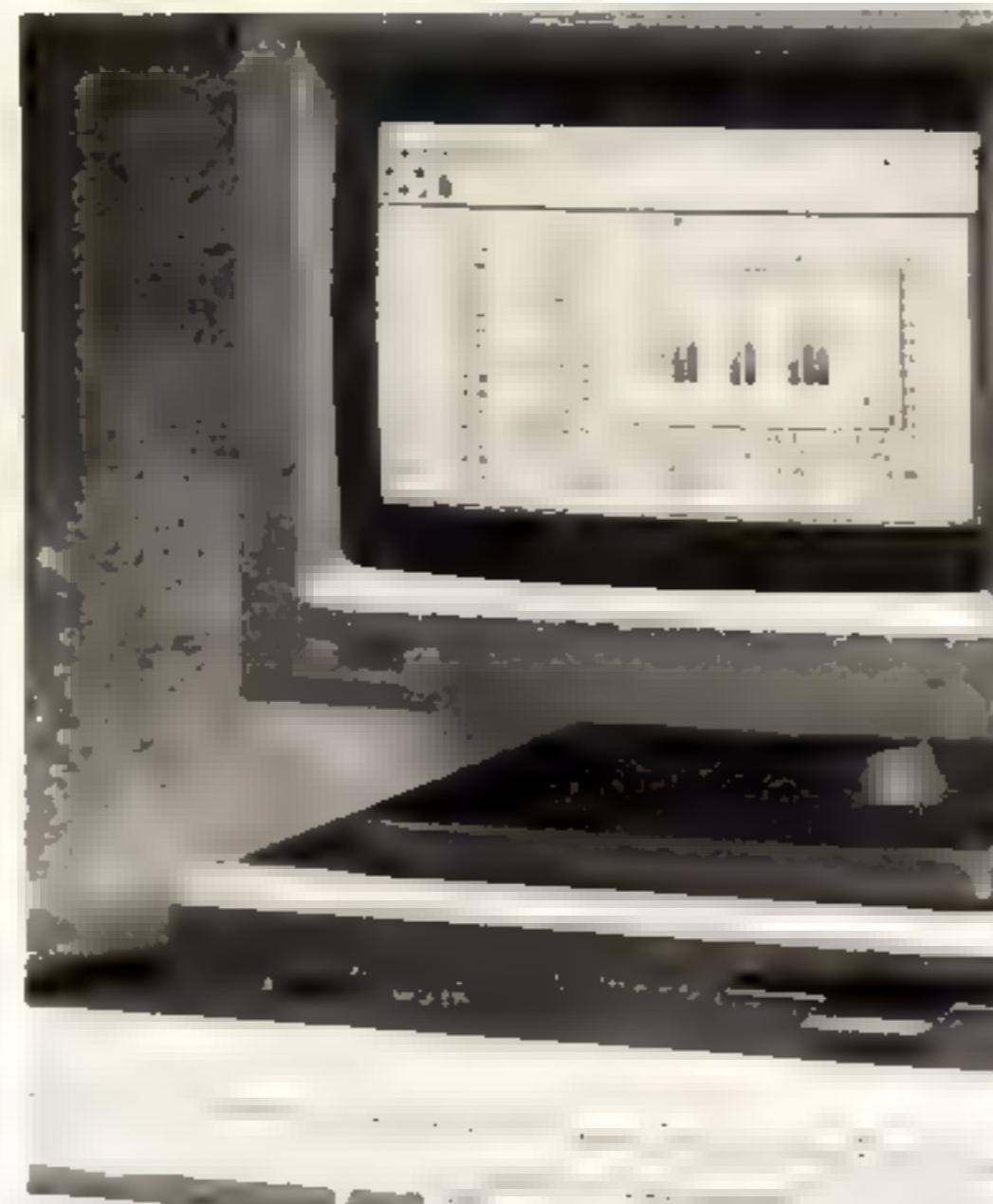
The printer supplied with the 8256/8512 is a dot-matrix machine of serviceable quality, but don't consider printing your knighthood letter of acceptance with it. Amstrad - in an attempt to attract sceptical buyers - bundled a daisy wheel printer with the 9512, which offers an improved quality of print over the dot matrix machine offered with the 8256/8512.

All machines are bundled with software, which includes a slow but easy to use word processor - LocoScript - and various other pseudo-business programs and utilities to be used with the CP/M operating system. Although as a general rule bundled software should be regarded with suspicion, LocoScript is a very usable package.

Unfortunately, the quality of the display and keyboard does not quite match the quality of the software. The 8256/8512 screens appear to be converted televisions left over from Amstrad's big push into the TV market in the latter half of the '70s. They are monitors though, and as such beat the hell out of any machine using the domestic television set as a means of display.

The PCW can handle an 80-column screen, so using word processors, spreadsheets and other business software is entirely feasible - and in fact, exactly what the machine is designed to do. The keyboard, although serviceable, does not quite match the quality of the Amiga keyboard, or those available for most PCs. It does, however, compare favourably with the keyboard of the Atari ST.

You would never buy a PCW to play games! Sound is provided via a buzzer similar to that of the PC. Nil sound, and a mono display making game-play next to impossible for anything other



• The ultimate? The Atari ST offers arguably the best all-round performance of all the machines available for our £500 budget. Great for games, and with plenty of serious applications too - it's our choice

than a text adventure or perhaps Chess or Scrabble (the most popular game choices of PCW types anyway).

Verdict? Why do I keep having to use the word serviceable to describe most of its features? The machine is a compromise on all counts. It has a monitor, but one which is poor compared with similar offerings from other manufacturers. The keyboard - although usable - is just a little clunky. It has disk drives but they are of the 3" variety found almost exclusively in Amstrad machines, and the disks are very expensive - typically around £22 for 10 (compare that with £5-£6 for 10.5.25" and £10-£12 for 10.3.5").

But don't write it off - it does have good points. Everything you need to word process and begin computing in one box, including the software. A printer is bundled with all models; although it varies in quality (i.e. between a serviceable dot-matrix or serviceable daisy wheel) it is usable for 'daily' correspondence.

Does it fit the spec? The answer has to be a resounding no. Games-playing is all but out of the question. The machine is great for word processing and general small business use, but does not match the original computer/user spec and so must be rejected.

And that's it. Several machines have been examined, two of which have been rejected, leaving the PC and the Atari ST as contenders for your hard-earned - but which one should you choose? Bearing in mind that any suggestion includes all of my prejudices, I would select the ST as the machine to buy.

The ST is a machine which has everything you need right now. Almost all games releases include an ST version and there is a plethora of good business software. Good quality monitors (colour and mono) are available and the disk drives are reasonably fast and reliable.

If you need compatibility with the office PC then you can buy a PC emulator for around £60, which will allow you to run all the industry standard packages, such as WordStar and dBase (v-e-r-y s-i-o-w-l-y).

Although both sound and graphics leave a little to be desired they are far superior to the offerings

Printers

Cheap printers are advertised throughout the mail order ads, but a couple of inexpensive general purpose ones are the Citizen 120D (£130 or so), the Star LC 10 (£195) which has more styles available, and the 24-pin NEC P2200 (£315) for high quality.

of both the PC and the PCW. And unlike both of those machines, the ST has an exciting future. Do you really want to use unfriendly, command oriented operating systems written 10 years ago? Surely computing is all about what's new?

In terms of both soft and hardware, the ST is a better all-round machine than any of the others discussed.

So - choosing a machine is not that difficult. You don't have to bombard the technical editors of computing magazines with pleas for help regarding the purchase of a machine. Determine what it is you want to do with a computer, then read the specifications of all the available machines. Go along to your local computer shop and try out several machines - contrast the keyboards and monitors. How do they compare? Are the software packages that you'd like to use available for the machine of your choice? Does it have a future?

Remember, after investing £500, you're going to be tapping at the keyboard and sitting bleary-eyed before the monitor of your chosen machine for a long time to come.

Music micro

You don't play many games, but you do play in a band? Then MIDI is for you. Musicians need MIDI, they go well together, gives them a good feeling, lets them experiment for hours and hours.

MIDI is an acronym for Musical Instrument Digital Interface, and with it, you can connect an instrument with a digital input/output and drive it from a computer using suitable software. Using MIDI with a computer and instrument is like using a word processor instead of a typewriter. You can create whole passages, lines, riffs and licks, store them in your computer and play them through your synthesizer keyboard or via your digital guitar.

You can change key, alter whole lines and even change the instrument. You can lay down several tracks consisting of, say, a drum, guitar, keyboard and horns and mix them as you please.

Which machine lets you do all this? Well, several - with expensive add-on interfaces. Only one machine comes pre-equipped with the necessary hardware, and that machine is the Atari ST. The only machine with a built-in MIDI port. Professional, as well as amateur musicians everywhere, playing all types of music, use the ST as the medium for their adventures in digital sound. If you're a musician or just want to dabble, then the ST is your machine.

Write choice

At the end of a hard day of lorry driving, when the last load has been dumped, you need to unwind, relax, pursue some activity which will allow you to vent the day's pent-up aggression.

You've considered writing a radio play about the horrors of the 11-30pm route along the Mile End road, but your Jupiter Ace doesn't have a word processor and you don't know which machine to buy. Don't worry, there is a machine that doesn't require you to be initiated into the murky underworld of bits and bytes, ROMs and RAMs and other obscure computer jargon. That machine is the Amstrad PCW. The PCW is the ideal machine for the budding author like what you are. It comes with everything you need, all in one package.

A green screen monitor contains the electronics and disk drives, there is a keyboard and even printer - which is ideal for those first drafts of your MS. All this and the software to allow you to do the writing too, in the form of a word processor - LocoScript - which is an excellent and comprehensive application for first-time users, and computer un-sophisticates. All you have to provide are the ideas.

Everything bolts together simply and requires no setting-up. You simply switch on and start writing, and when you have some text an easy-to-remember command transfers it to the printer. Simple, straightforward, and anyone can operate it. •



HOMESOFT (UK)

Software and Hardware



ALMOST PROBABLY THE CHEAPEST MAIL ORDER / RETAILER IN EUROPE

SPECIAL PACK

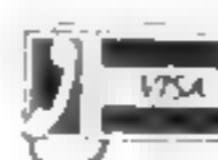
Complete with Standard A500, Kickstart 1.3, Workbench 1.3 Tutorial Disks, Basic + Mouse. Also FREE TV Modulator, Photon Paint Art Package, Mouse Mat, Mouse Bracket, 10 DS/DD Disks in Library Case. PLUS the Following Games: Space Harrier, Super Hang-On and Gauntlet II for

ONLY £399.00

Philips CM8833 Medium Resolution Stereo Monitor ONLY £235.00	Commodore 1084S Medium Resolution Stereo Monitor ONLY £255.00
Cumana External 1MB Drives ST or Amiga ONLY £95.00	WATCH THIS SPACE: PC ENGINE COMING SOON!!

16 BIT SOFTWARE	AMIGA	ATARI	16 BIT SOFTWARE	AMIGA	ATARI	16 BIT SOFTWARE	AMIGA	ATARI	ATARI 1040 STFM £445.00 BUSINESS PACK	ATARI SM 124 HI RES MONITOR £120.00	ST CLOCK CARD (Internal) £24.90
1943 Battle of Midway	13.90	13.90	Joan of Arc	12.70	12.70	Ultimate Golf	13.90	13.90			
3D Pool	11.70	11.70	Kennedy Approach	14.70	14.70	U.M.S.	14.70	14.70			
4th & Inches	13.90	13.90	Kenny Dalglish Soccer	11.70	11.70	Virus	11.70	11.70			
4 x 4 Off Road Racing	13.90	13.90	Kristal	12.70	12.70	Vindicators	11.70	11.70			
Amiga Gold Hits	16.80	----	Land of Legends	17.70	17.70	Victory Road	14.70	11.70			
Arcade Force Four	----	16.80	Last Duel	10.99	10.99	Weird Dreams	14.70	14.70			
Action Service	11.70	11.70	Lancelot	11.70	11.70	Western Europe Scenery	12.70	12.70			
Action ST	----	13.90	Munsters	11.70	11.70	Worldclass Leaderboard	13.90	13.90			
Ballistix	11.70	11.70	Nebulus	13.90	13.90	Who Framed R. Rabbit	14.50	----			
Balance of Power 1990	14.70	14.70	Neather world	13.90	13.90	Zany Golf	16.80	16.80			
Battlechess	16.80	----	Nineteen Part One	11.70	11.70	Zoom	11.70	----			
Barbarian II	11.70	11.70	Orbiter	14.70	14.70	Zak McKracken	16.80	16.80			
Batman	14.70	11.70	Outrun Europa	10.99	10.99	LED Storm	13.90	13.90			
Battlehawks 1942	14.70	14.70	Overlander	14.70	11.70	Lombard RAC Rally	14.70	14.70			
Blasteroids	14.70	11.70	Pacmania	11.50	11.50	Advanced Ski Simulator	11.70	11.70			
Bombuzal	14.70	14.70	Pioneer Plague	14.70	----	Advanced Rugby Sim.	11.70	11.70			
Butcher Hill	13.90	13.90	Pools of Radiance	15.90	15.90	Black Tiger	16.80	13.90			
Chaos Strikes Back	----	9.70	President is Missing	14.70	14.70	Cosmic Pirate	11.70	11.70			
Captain Blood	14.70	14.70	Prison	11.70	11.70	Crack II (Dugger)	11.70	11.70			
Captain Fizz	9.70	9.70	Project D Backup Tool	29.50	----	Dragonscape	11.70	11.70			
Crazy Cars II	14.70	14.70	Purple Saturn Day	14.70	14.70	Hybris	17.70	17.70			
Custodian	13.90	13.90	Rambo III	14.70	11.70	I Ladiens	14.70	11.70			
Cybernoid	13.90	13.90	Return of the Jedi	11.70	11.70	Inc. Shrinking Sphere	14.70	11.70			
Dark Fusion	13.90	13.90	Renegade III	14.70	11.70	Populous (EA)	16.80	16.80			
Double Dragon	11.70	11.70	RoadBlasters	16.80	16.80	Scorpion	14.70	14.70			
Dream Zone	14.70	14.70	Robocop	14.70	11.70	Trained Assassin	14.70	14.70			
Dragon Ninja	14.70	12.70	R-Type	14.70	11.70	WEC Le Mans	14.70	11.70			
E. Weaver Baseball	13.90	----	Scenery Disk no 7	12.70	12.70	Manhattan Dealers	14.70	14.70			
Elite	14.70	14.70	Scenery Disk no 11	12.70	12.70	Menace (Draconia)	11.70	11.70			
Empire Strikes Back	11.70	11.70	SDI (Activision)	11.70	11.70	Mim Golf	13.90	13.90			
Espionage	11.70	11.70	Silkworm	11.70	11.70	Microprose Soccer	14.70	14.70			
Five Star Compilation	----	14.70	Skrull	14.70	14.70	Millenium 2.2	11.70	11.70			
Fantavision	29.00	----	Shoot-em Up Con. Kit	14.70	14.70	Motor Massacre	13.90	13.90			
Flight Simulator II	23.90	23.90	Star Wars	11.70	11.70						
Flying Shark	14.70	14.70	Stormtrooper	11.70	11.70						
Fright Night	11.70	11.70	Starglider II	14.70	14.70						
Galdregon's Domain	11.70	11.70	Sword of Sodan	17.70	----						
Galactic Conqueror	14.70	14.70	STOS	----	19.90						
Games - Summer Ed.	13.90	13.90	STAC	----	29.90						
Ghosts 'n' Goblins	13.90	13.90	Sundog - Frozen Legacy	----	8.90						
Heiter Skelter	9.70	9.70	Three Stooges	17.70	17.70						
HK M	10.99	10.99	Triad	17.70	17.70						
Hostages	14.70	14.70	Tiger Road	13.90	13.90						
International Karate +	14.70	11.70	Techno Cop	13.90	13.90						
Iron Lord	16.80	16.80	TV Sports Football	17.50	----						
Japan Scenery Disk	12.70	12.70	Thunderblade	14.90	12.90						
Jet	23.90	23.90	Turbo Cup	11.70	11.70						

GOODS DESPATCHED
WITHIN 12 HOURS
SUBJECT TO AVAILABILITY



AMIGA A500 ONLY

FOR NEW RELEASES AND ITEMS NOT LISTED PLEASE PHONE US TODAY.
NEW TITLES WILL BE DESPATCHED ON CONFIRMED DATE OF RELEASE.

GOODS SUBJECT TO AVAILABILITY AND CHANGE WITHOUT PRIOR NOTICE.
OFFER ENDS 31st JULY 1989. HOMESOFT (UK) CARES FOR ITS CUSTOMERS.

PERIPHERALS

Competition Pro extra Joystick	£11.50
Competition Pro 5000 (Black) Joystick	£11.35
Cheetah 125+ Joystick	£6.40
Cheetah Starfighter Joystick	£11.50
Quickshot II+ Joystick	£8.90
Quickshot II Turbo Joystick	£10.55
Konix Speedking Joystick	£9.70
Konix Speedking Joystick + Autofire	£10.20
Konix Navigator Joystick	£12.50
3.5" DS/DD Disks per Ten	£9.50
3.5" DS/DD Disks per Fifty	£47.00
100 Capacity 3.5" Disk Box	£10.50
50 Capacity 3.5" Disk Box	£7.90
200 Capacity Posso Dlexue 3.5" Box	£5.50
100 Capacity 5.25" Disk Box (White Stocks Last)	£14.99
3.5" Head Cleaner Kit (Deluxe)	£4.50
Twin Joystick Extension Lead	£3.50
Quality Mouse Mats	£4.50
Mouse Bracket	£2.50
Amiga Clear Perspex Dust Cover	£4.50
Four Player Joystick Adapter	£4.50
Abacus Learn Computing Books (S.A.E. for Details)	

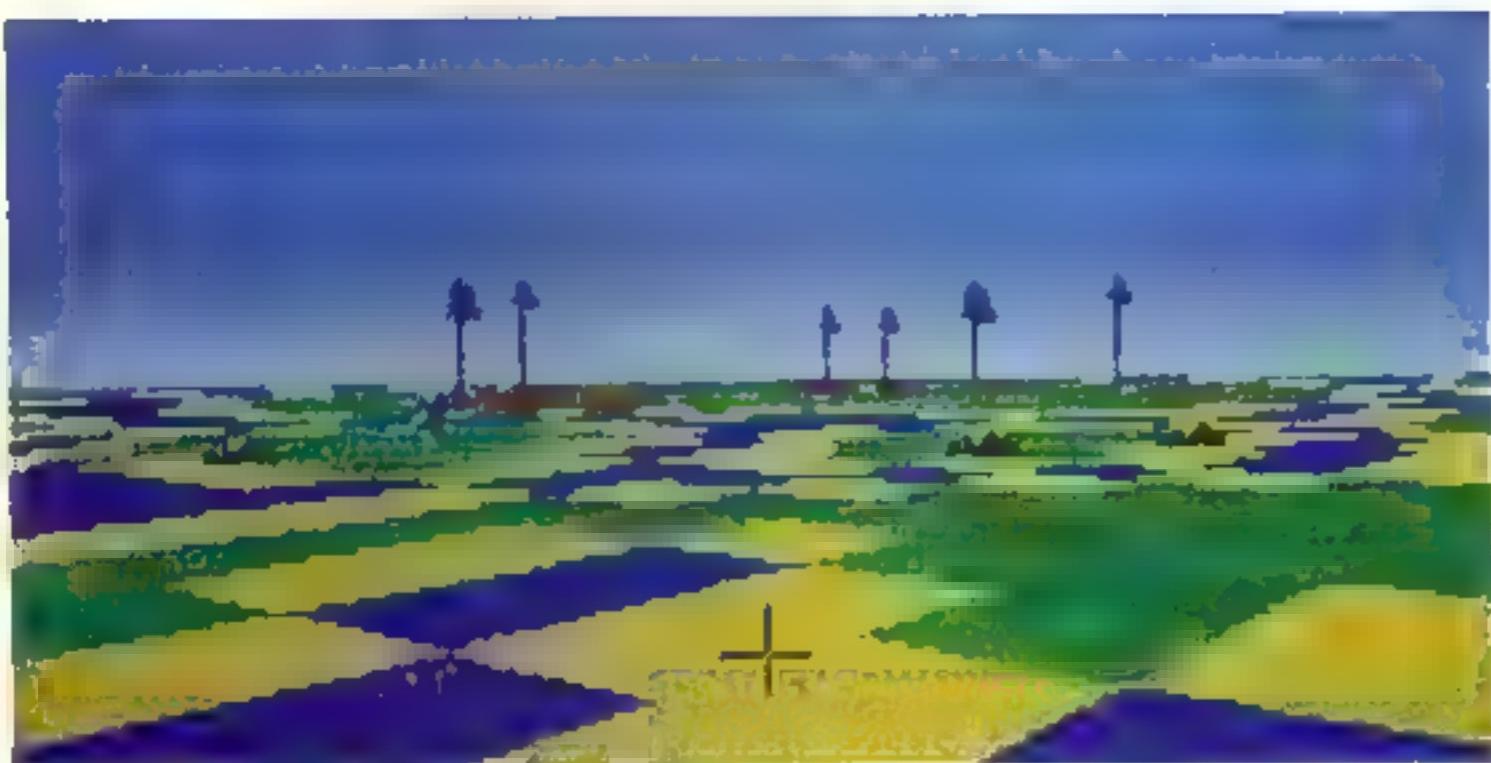
ATARI 1040 STFM £445.00 BUSINESS PACK	ATARI SM 124 HI RES MONITOR £120.00
ST MOUSE £22.50	ATARI SC 1224 MED. RES MONITOR £370.00

REAL TIME CLOCK £42.50	COMMODORE MPS 1230 DOT MATRIX PRINTER ONLY £130.00 Inc Lead
---------------------------	--

COMMODORE A501 1mb EXPANSION CARTRIDGE £130.00	COMMODORE A520 T.V. MODULATOR £19.99
WORKBENCH V1.3 £14.99	1352 AMIGA MOUSE £31.50

SUPERB PLAYABLE DEMOS!

Britain's leading 16-bit magazine ST Amiga Format proudly presents
two dynamic demos on the May issue's cover-mounted disk.



ST - ARCHIPELAGOS

Two levels of Logotron's infectious 3D brain-busting strategy game just for you. Traverse alien landscapes to rid the planet of the forces of old. Load up your disk and prepare to be stunned by one of the games of the year.



AMIGA - BLOOD MONEY

Screens and screens of Psygnosis' sensational scrolling shoot-em-up to safari through. If you thought Menace was tough then think again. This one will keep you glued to your stick. Exclusive review inside.



AND INSIDE THE ISSUE:

- Flight simulators of the future
- Build your own sound sampler
- Deluxe Paint III analysed
- Desktop publishing with Calamus
- Games pages packed with exclusives
- Save £17 with Format vouchers



On sale next Thursday, 20th April, at a newsagent near you.

Be part of the action - order your copy now.

On April 11th 1984 the CPC, Amstrad's first computer, was launched to critical acclaim from the entire computer press. An instant success, it's now well on the way towards its three millionth sale. Steve Carey tells the tale of the machine that made Amstrad

Forget Amstrad plc 1989, beefy Brentwood blokes boasting £100 million profits and running rings round a bewildered IBM. Think instead of Amstrad '83, a wee Tottenham import/exporter with a handful of staff and a total turnover of £20 million. It had done the lot: TVs, videos, car radios, CB radios, music centres, those huge headphones with sliding bass and treble controls.

Now Amstrad intended to impose this pattern on a new market. Employ someone to design a computer and hand the design over to a subcontracted manufacturer to build 100,000 to flog at Christmas. Simple as that. (There was no-one at Amstrad up to it. Employee Ivor Spital recalls landing the job of examining the competition, such as the Commodore VIC-20, as the result of the toss of a coin. He doesn't say whether he won or lost.)

'All Amstrad knew,' Technical Manager Roland Perry emphasises, 'is that it definitely wanted this thing designed; it definitely wanted it ready on this date; and it definitely wanted to make 100,000 of them' – at that time an immense order for a one-off 'flog-'em-and-forget-'em' enterprise.

This background – cheap and cheerful, and that order – made an Amstrad computer a risky bet. But it was also the reason why it succeeded. Home computers at the time tended to be designed by engineers funded from a backlog of orders.

So used was Amstrad to doing things its way – design a box and find someone to fill it – that not only were parts and chips bulk-ordered, but there was a plastic casing ready long before there was ever a computer to put in it! But its usual suppliers were unable to design a computer, and it found itself reluctantly drawn into the world of the 'techies.'

And Amstrad's first venture into this alien environment was a bizarre flop. The previously untried contractors completely underestimated the task. Things came to the boil in late July 1983 when the prototype was delivered. The black and white version had just that, with no grey scales; the colour machine had no palette; the memory map had the screen RAM in the middle; and there was a second microprocessor which remains a mystery to this day.

Europe and beyond

The 6128 was to be the Amstrad machine that conquered America. European sales had always been important, in Germany the 464 was second behind the C64; in Spain, second to the Spectrum; and in France it was, and remains, top-selling home micro. This success, together with inroads into Scandinavia, Greece and Australasia, encouraged Amstrad to dip a toe in the huge US market. Indescomp Inc. of Chicago was given the opportunity to be the first to offer the new machine. But sales were delayed and never really took off.

Hip to be square



Perhaps it's understandable that Mr Sugar got a little impatient.

A case of Perry aid

Of course Amstrad escaped. It hired Roland Perry and Bill Poel from Brentwood-based Ambit. Perry took the plastic casing and machine specification

Fashion victim

Interested in looking cool? Want to impress your mates? Then don't buy a CPC. But if you want a reliable, no-nonsense, durable and useful introduction to computing, it could be for you.

There are two choices: tape or disc, mono or colour. The 464 is OK if you are immortal and/or have endless patience. Games take five or more minutes to load – and it seems much, much longer. The 6128 takes fast loading 3 inch discs, which are costly – £3: don't buy very cheap new ones – but robust and last forever.

Your other choice is between mono (green and shades of grey to black) and colour (depends on the resolution mode, though it's usually four or sixteen). If you hate games and just want to do 'serious' stuff (word processing, using databases and spreadsheets) you'll be fine with mono. If you're a games fan you'll miss colour greatly. Sound is unspectacular, though much better than the PCW or PC.

Because the CPC uses the Z80 processor, which

recently received a congratulatory telegram from the Queen, there's a trade-off between speed and screen size. You'll notice the difference if you're used to arcade machines or friends' sexier 16-bit computers, but even so you can still play a good game on the CPC. There's a wide range of software available, both games and 'serious.' A word of warning, however, to parents: don't believe sincere salesmen who tell you about the 'thousands of excellent educational programs.' There's about twenty, of which half are worth loading, let alone buying.

Cost: £199 for mono 464; £299 for colour 464 or mono 6128; and £399 for colour 6128. But look out for 'bundles' and bargains in Comet, Dixons and Toy'R'Us. Don't fall for the 'Home Entertainment Centre': you can buy the extras cheaper later if you must. Second hand prices vary greatly, but the CPC is durable and this is a good option, since you'll often pick up software, hardware add-ons, books, mags and so on at a bargain price.

MICRO BIOGRAPHY

AMSTRAD CPC

to contacts and acquaintances, meeting a variety of responses, all negative. Given the nature of the brief you couldn't blame them: 'Fill this; parts are ordered; it must be 6502 processor based [in the end it wasn't]; sign this non-disclosure agreement; and er, no, I'm sorry, I can't tell you who it's for.' Eventually he found people with the nerve to take on the job and the ability to bring it off: Richard Clayton and Chris Hall of Locomotive Software, who produced the BASIC; and Mark-Eric Jones of MEJ Electronics, who designed the hardware, commissioning Roger Hulley to design the circuit board and the gate array. (Both companies have since worked with Amstrad on other machines.)

The launch, on 11th April 1984, was unusual in that, at a time when it was traditional to present a last minute bodge of dubious prototypes, Amstrad had machines not only present and working, but manufactured from final tooling and masks. Not surprisingly it was a success, capturing 16% of the home computer market by Christmas '84. Indeed, how could it fail? Anyone could have foreseen it. It's just that no-one did.

The 464 had, however, a drawback obvious to anyone who's ever loaded a program from cassette. By the time you've made a cup of tea, written that letter to your bank manager and done the weekend shopping, *Harrier Attack* had nearly loaded.

The disc-based 664 duly arrived. Launched in May '85 at £350 for the green-screen version and £450 for colour, it was rendered obsolete in August by the 6128, with an extra 64K of bank-switched memory allowing it to run CP/M+, a major upgrade of the disc operating system. 'It suffered from a leap in technology,' Sugar explained, and had a consoling message for dealers: 'They shouldn't have much difficulty getting rid of [664s] at reduced prices.' It was ever thus for the poor Amstrad dealer.

Perry playfully claims he's afraid to wear his 664

T-shirt 'because I'd get lynched,' but 664 customers must have felt like Kathleen Turner's Edsel-owning father in *Peggy Sue Got Married*. Even worse, the launch of the 6128 (at the old 464 prices) and cancellation of the 664 coincided exactly with a £100 cut for the 464! Those unfortunate enough to be buying in summer rather than at Christmas felt shafted, as well they might.

By Christmas '85 Amstrad was ready to launch the third CPC machine onto the UK market - the 6128. There were even three specially shot 40 second Delaney Fletcher Delaney television commercials, part of £4,500,000 lavished upon the range.

And still it sold. Sugar expected to shift 600,000 CPCs in 1985. In January of 1986, with no fanfare and no presentation - a stupidly squandered opportunity - the one millionth CPC changed hands. (The two millionth sale was passed last year, again without celebration.)

With the launch of the 6128 and CPM+ the CPC's image underwent a subtle transformation. Suddenly there were meaty applications - databases, spreadsheets and, with *Tasword 6128*, real word processing at only £25. Soon the rush was on to provide upgrades, utilities, ROMboards. Even 'vertical market' software took off briefly, off the shelf programs to run butchers' and video hire shops. And though the machine has been left behind by PCs, it's still the cheapest way to computerise a small business.

But it's not, and the rumours of its imminent demise which have been around for at least two years are greatly exaggerated. Hardware and software sales are steady, perhaps even expanding. And reliability and durability guarantee it a high re-sale value, so that as big brothers and sisters move up to Amigas or STs, younger siblings or friends move up to CPCs. As an entry into computing it is ideal, and it's not only new owners who buy software for their machines. Sales of games are only just behind the Commodore 64 (and sometimes in front of it), and regularly twice as much as the combined total of the Amiga and ST.

But Amstrad's cynicism in launching the 664 while aware that it was soon to be replaced; its reluctance to boost its image by price-cuts or advertising; and worries about availability of discs all fuel the impression that Amstrad no longer gives a toss for the CPC. Still, its success has never depended on marketing, and it will undoubtedly continue to thrive in the face of apparent indifference from its manufacturer. ■

Five years of the CPC

- January 83 Amstrad decides to do a computer
- Easter 83 Plastic casing complete
- July 83 First 6502-based prototype
- August 83 Perry called in; Locomotive and MEJ Electronics agree on a Z80 machine
- 11 April 84 464 launched
- May 85 664 launched
- August 85 6128 launched and 664 killed
- January 86 1,000,000 mark passed
- Late 88 2,000,000 mark passed

**24 Hour
DISPATCH**
(Subject to availability)

BEST BYTE

**ALL ORDERS SENT BY
FIRST CLASS
POST**

STATIONERY

CONTINUOUS LISTING PAPER

11" x 9 1/2" 70 gsm Plain white
High Quality Micro-perf.
2000 Sheets £16.50
10000 Sheets £59.95

COMPUTER LABELS 89mm x 32mm

Sprocket Fed 2 across
1000 Labels £4.95
16000 Labels £44.95

JIFFY BAGS ALSO AVAILABLE AT
75% OFF R.R.P. SEND FOR LIST

3.5" DSDD Disks
High Quality Unbranded
£9.45 for box of ten

**SPECIAL OFFERS TO
NCE READERS - UP
TO 45% OFF R.R.P**

ATARI ST RRP OUR

F-16 Combat Pilot	24.95	14.50
Adv Rugby Simulator	19.99	11.50
Afterburner	19.99	12.50
Baal	19.95	11.50
Balstix	24.99	14.50
Barbarian II	19.99	11.50
Batman	19.95	11.50
Blasteroids	19.99	12.50
Cosmic Pirate	19.99	11.50
Crazy Cars II	19.99	11.50
Double Dragon	19.99	12.50
Dragonscape	19.95	11.50
Dungeon Master	24.95	14.50
Dungeon Master Editor	9.95	6.90
Elite	24.95	14.90
Emmanuelle	19.99	11.50
Falcon	24.99	14.50
Federation of Free Traders	29.99	20.85
Football Director II	19.99	11.50
Football Manager II	19.99	11.50
Hewson Premier Collection	29.95	17.90
Hits Disk Vol II	24.95	14.90
Hostages	24.95	14.50
Human Killing Machine	14.90	10.50
IK+	19.99	12.50
Incr Shrinking Sphere	19.99	12.50

ATARI ST RRP OUR

Jean of Arc	13.99	13.55
K D Soccer Manager	19.95	11.50
Last Duel	14.99	10.50
Leisure Suit Larry II	29.99	19.10
Lombard RAC Rally	24.95	14.50
Operation Neptune	24.95	14.50
Operation Wolf	19.95	11.50
Padland	19.95	11.50
Precious Metal	24.99	14.90
Purple Saturn Day	24.95	14.50
Question Sport	19.99	12.50
Rear Ghostbusters	19.99	12.50
Roy Rovers	19.99	13.55
R-Type	19.99	12.50
Return of Jedi	19.95	12.50
Run the Gauntlet	19.99	11.50
S.D. World Snooker	19.99	11.50
Speedball	24.99	14.90
Star Ray	19.95	11.50
STOS	29.95	19.50
Teenage Queen	19.95	11.50
Thunderblade	19.99	13.55
Tracksuit Manager	19.99	11.50
Triad Vol 1	29.99	18.50
War in Middle Earth	24.99	15.50
Zak McKracken	24.99	17.10

AMIGA RRP OUR

Afterburner	14.99	15.75
Baal	19.95	11.50
Balstix	19.95	11.50
Batman	24.95	14.50
Blasteroids	24.99	15.75
Cosmic Pirate	19.99	11.50
Crazy Cars II	24.99	14.50
Denars	19.99	13.50
Double Dragon	19.99	12.50
Dragons Lair (1Mb Only)	44.95	32.85
Dungeon Master (1Mb Only)	24.99	15.50
Elite (Out now)	24.95	14.50
Emmanuelle	19.99	11.50
Falcon	29.99	17.50
Football Director 2	19.95	11.50
Football Manager 2	19.99	11.50
Gauntlet II	19.99	13.55
Heroes of the Lance	24.99	18.75
Hits Disk Vol 2	24.95	14.90
Hostages	24.95	14.50
Human Killing Machine	14.99	10.50
Incr Shrinking Sphere	24.99	15.50
International Karate	24.99	16.50
K D Soccer Manager	19.95	11.50
Kennedy Approach	24.95	14.50
Last Duel	14.99	10.50

AMIGA RRP OUR

Lombard RAC Rally	24.95	14.50
Operation Neptune	24.95	14.50
Operation Wolf	24.95	14.50
Pacland	19.95	11.50
Pac Mania	19.95	11.50
Publishers Choice	99.95	74.95
Purple Saturn Day	24.95	14.50
Question of Sport	19.99	12.59
Real Ghostbusters	24.99	15.75
Rocket Ranger	29.95	17.90
R-Type	24.99	15.75
Run the Gauntlet	24.99	14.50
S.D. World Snooker	19.99	11.50
Space Harrier	24.99	14.90
Speedball	24.95	14.90
Sword of Sodan	29.99	17.50
Teenage Queen	19.95	11.50
Test Drive II	29.99	21.25
The Krystal	29.99	17.90
Thunderblade	24.99	17.10
Tracksuit Manager	19.99	11.50
Tread Vol 1	29.99	18.50
T.V. Sports Football	29.99	17.50
War in Middle Earth	24.99	15.50
Workbench 1.3	14.99	14.59
Zak McKracken	24.99	17.10

Customer No (if known): _____

Name: _____

Address: _____

All orders sent within 24 hours (subject to availability). Mail order only. To order send this form with Cheque/Postal Order payable to "BEST BYTE" to:

BEST BYTE (DEPT NCE 232 QUARRY GARDENS, TONBRIDGE, KENT TN9 2SG)

WORLDWIDE SOFTWARE
1 Bridge Street
Galashiels TD1 1SW

Credit Card Order
Telephone Line

North
Scotland
N. Ireland
0896 57004

SPECIAL OFFER
OCEANIC C64/128 COMPATIBLE
DISK DRIVE
ONLY £112.00

WORLDWIDE SOFTWARE

Overseas Express Service Now Available Overseas Express Service Now

OVERSEAS OVERSEAS OVERSEAS OVERSEAS OVERSEAS
Overseas customers can now contact our

Export Department at:

Worldwide Software
106A Chilwell Road
Beeston
Nottingham NG9 1ES
England

Overseas Telephone Only:
Nottingham 225368

Europe Shipping Costs Are:
£1.50 Per Cass/Disk For Normal Airmail
£2.00 Per Cass/Disk For Express Airmail

Outside Europe Shipping Costs
£2.00 Per Cass/Disk For Normal Airmail
£3.00 Per Cass/Disk For Express Mail

WORLDWIDE SUPER SPECIAL OFFERS ON COMMODORE SOFTWARE

COMPILATIONS	COMPILATIONS	COMPILATIONS	COMPILATIONS	COMPILATIONS	COMPILATIONS	COMPILATIONS	
Fists "N" Throttles Cass Disk 9.25 11.50	C64	Game Set & Match II Cass Disk 9.25 13.50	C64	Ocean In Crowd Compilation Cass Disk 11.20 13.50	C64	Frank Brunos Big Box Cass Disk 9.25 11.99	Konami Arcade Collection Cass Disk 7.25 13.99
Sports World 88 Cass Disk 7.99 11.99	C64	Magnificent Seven Cass Disk 7.99 13.99	C64	We Are The Champions Cass Disk 7.99 13.99	C64	Gold Silver Bronze Cass Disk 11.99 13.99	Konami Coin Ops Cass Disk 7.99 11.99
Supreme Challenge Cass Disk 9.99 13.50	C64	Taito Coin Op Hits Cass Disk 9.99 13.50	C64	Giants Compilation Cass Disk 9.99 11.99	C64	Leaderboard Collection Cass Disk 11.99 14.90	Solid Gold Cass Disk 7.99 11.99

EDUCATIONAL	EDUCATIONAL	EDUCATIONAL	EDUCATIONAL	EDUCATIONAL	EDUCATIONAL
LARGE VARIETY OF EDUCATIONAL SOFTWARE NOW AVAILABLE FOR 3 TO 15 YEAR OLDS - SEND SAE FOR CATALOGUE BY RETURN					
FAST DELIVERY OF ALL STOCK ITEMS BY 1ST CLASS MAIL IN UK. CREDIT CARD ACCOUNTS DEBITED ONLY ON DESPATCH SPECIAL OVERSEAS BY AIRMAIL WORLDWIDE					
COMPUTER CONTROLLED DESPATCH ENSURES FAST DELIVERY ON ALL STOCK ITEMS					

CREDIT CARD ORDER TELEPHONE 0896 57004

NEW RELEASES DESPATCHED ON DAY OF RELEASE

CREDIT CARD ORDER TELEPHONE 0602 252113

WORLDWIDE SUPER SPECIAL OFFERS ON COMMODORE SOFTWARE

AMIGA SOFTWARE	C64/128 SOFTWARE	CASS DISK	LEADERBOARD	AMIGA SOFTWARE
3D Pool	3D Pool	7.25 9.00	Leaderboard Fam Courses II	4.99 6.99
4th and Inches	14.95	7.99 11.99	Leaderboard Collection	11.99 14.99
Afterburner	17.95	7.99 11.99	Led Storm	7.99 11.99
Alien Legion	17.95	7.99 11.99	Menace	9.75 11.20
Archipelagos	18.75	11.20 14.95	Micro Soccer	11.20 14.95
Balance of Power 1990	18.75	7.99 11.99	Mini Golf	7.25 11.20
Ballistix	14.95	9.99 11.99	Mini Office II	12.75 14.95
Barbarian II	13.25	6.99 9.50	Motor Massacre	7.99 11.99
Batman	16.45	7.99 11.99	Neuromancer	12.99
Battlehawks 1942	19.95	6.99 9.99	Night Hunter	7.99 11.99
Black Tiger	17.95	6.99 10.50	Night Raider	7.99 11.99
Blasteroids	17.95	7.99 11.99	Operation W.I.L.D.	6.50 10.50
California Games	17.95	7.25 11.20	Operation Neptune	7.25 11.20
Captain Fizz	11.20	6.99 9.45	President Is Missing	7.25 9.75
Carrier Command	16.45	7.99 11.99	Project Firestar!	12.99
Colossus Chess X	17.95	7.99 11.99	Project Stealth Fighter	11.20 14.95
Cosmic Pirate	17.95	14.95	Purple Saturn Day	7.25 11.20
Crazy Cars II	17.95	7.99 11.99	Real Ghostbusters	7.99 11.99
Custodian	14.95	7.25 11.20	Red Storm Rising	11.20 14.95
Cyberoid II	14.95	7.99 11.99	Renegade III	7.99 11.99
D.N.A. Warrior	14.35	12.99	Robocop	6.99 10.50
Denaris	19.95	7.99 12.99	Rocket Ranger	14.95
Double Dragon	16.45	6.99 10.50	Running Man	7.99 11.99
Dragon Ninja	16.45	7.25 9.99	Samurai Warrior	6.55 11.20
Dragon Scape	14.95	7.25 11.20	Savage	6.99 10.50
Dragon Slayer	24.95	9.99 14.99	Silent Service	7.25 11.20
Dream Zone	17.95	9.99 14.99	Skateball	7.99 11.99
Elite	16.45	14.99	Storm Lord	7.99 11.99
Emmanuelle	14.95	19.95 28.95	Techno Cop	7.99 11.99
F.O.F.T.	24.95	6.55	The Deep	7.99 11.99
F16 Falcon	20.95	6.99 10.50	Thunderblade	7.99 11.99
Fish	16.45	6.55 7.99	Tiger Road	7.99 11.99
Football Director II	13.25	9.00 13.50	Times Of Lore	7.25 11.20
Football Man II Exp. Kit	9.99	7.99 11.99	Titan	7.25 11.20
Fun School II	14.95	7.99 11.99	Tracksuit Manager	7.25
Gauntlet II	17.95	7.99 11.99	Tyger Tyger	7.25 9.45
Ghosts 'n' Goblins	18.75	6.99 10.50	Ultima I or III or II	14.95
Guerilla War	16.45	11.20 14.95	Ultima V	19.95
H.K.M.	17.95	7.99 11.99	Ultimate Golf	7.99 11.99
Hit Disks Vol I or Vol II	18.75	6.99 9.45	Vindicators	7.99 11.99
Hybris	17.95	17.95	War II Middle Earth	7.25 14.99
Incredible Shrink Sphere	17.95	19.99 24.99	Wec Le Mans	6.99 10.50
International Karate +	17.95	7.25 11.20	Weird Dreams	11.20 14.95
Joan Of Arc	17.95	7.25 11.20	Western Europe Scenery Disk	14.95
Kennedy Approach	17.95	11.20 11.20	Xenon	7.25 11.20
Kenny Dagleish Manager	14.95	6.99 10.50	Zak McKracken	11.99
Last Duel	14.95	6.55		
Leaderboard Birdie	17.95	9.75 11.20		
Led Storm	14.35			
PERIPHERALS				
Azimuth C64 Tape Head Align Kit	8.99			
C64 Dust Cover	4.99			
Action Reply MK V Professional	33.99			
JOYSTICKS				
Cheetah 125 Plus		6.99	Comp Pro 5000 Clear	13.95
Cheetah Mach 1		10.95	Comp Pro 5000 Extra	10.95
Comp Pro 5000		12.95	SpeedKing	10.99
C64/128 SOFTWARE		CASS DISK		

3.5" DS/DD With Labels Only £9.95 Per Ten
5.25" DS/DD Disk With Labels Only £4.99 Per Ten
All prices include Post and Packing in UK.
Please make Cheques and Postal Orders Payable to
WORLDWIDE SOFTWARE

WORLDWIDE SOFTWARE
106A CHILWELL ROAD
NOTTINGHAM NG9 1ES

Credit Card Order
Telephone Line

South
Midlands
Wales
0602 252113

SPECIAL OFFER
C64 DATASETTE UNIT
ONLY £18.50



BLANK DISKS

SAME DAY DESPATCH WHERE POSSIBLE

BLANK DISKS



ALL OFFERS AND PRICES SUBJECT TO CHANGE E & OE

ALTERNATIVE MICRO SHOW

REPORT



The Brands which Time Forgot

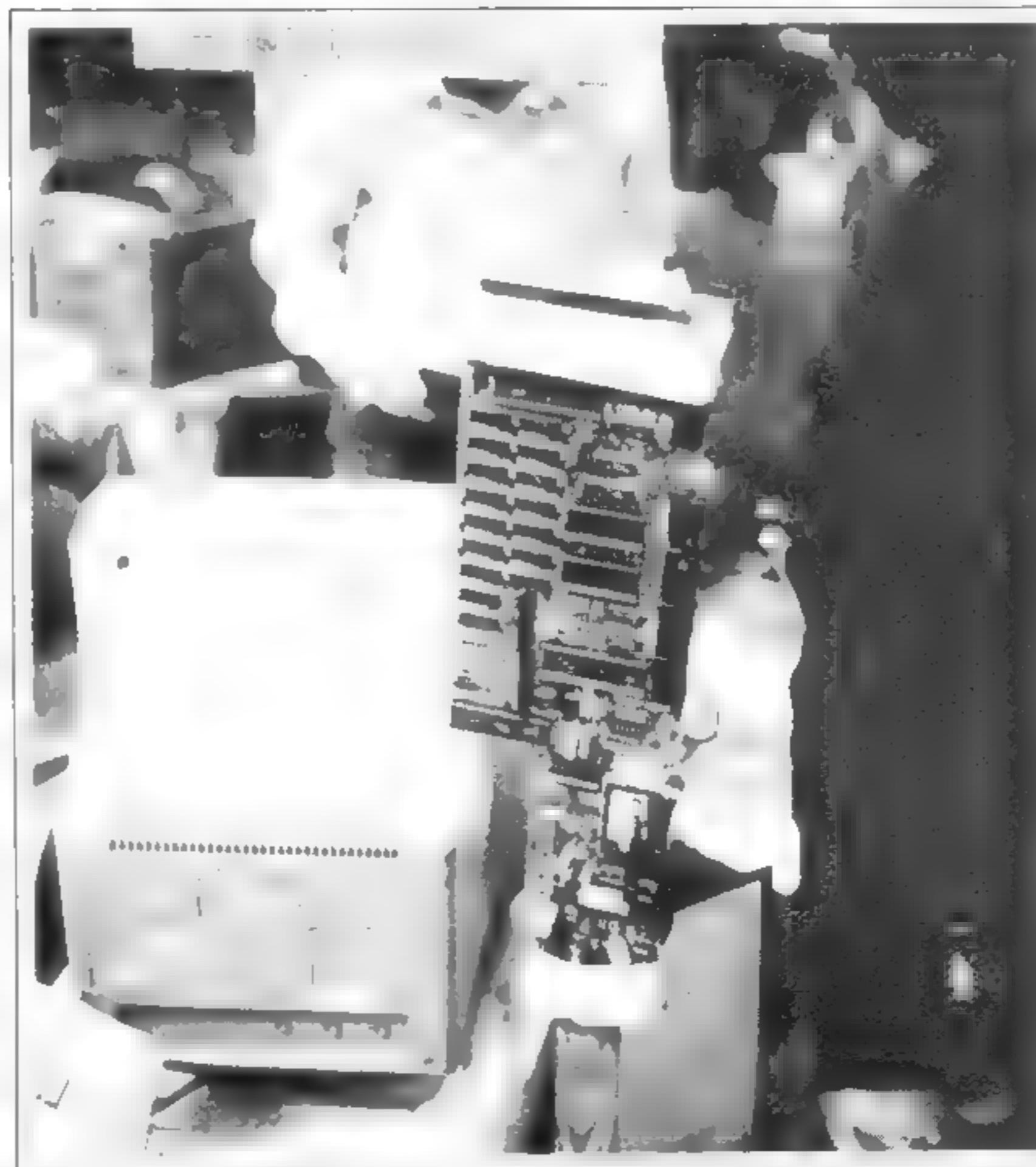
Back in issue 19, Express covered the world's largest computer show, The CeBit Fair at Hanover. London's Alternative Micro Show could be one of the smallest. Surprised at finding himself among 2000 other visitors, Andy Storer spent April Fool's Day looking over yesterday's hot news...

April Fool's Day indeed! "Expandable not Expendable" was a byline accompanying the launch of the Lynx back in '83; judging by what appeared to be the thirty miles of wiring and hook-ups surrounding survivor here in '89 the copywriters knew their stuff. Though they probably couldn't have foreseen the machine being showcased in a hall more used to housing flower arrangements, they would undoubtedly be pleased with the number of enthusiasts still flocking around the stand. If they cared to remember.

The Alternative Micro Show is for people who care to do just that or, rather, who prefer not to forget the time when their machine had a long bright future ahead of it. The fact that there was hardly anyone under thirty to be seen testifies to this, but then we're only talking about machines that 'disappeared' less than five years ago. Such is the pace of change in Computerdom. So, in amongst the beards and bald patches, car coats and Millets rucksacks, are the brands which time forgot...

Jupiter Aces, Orics, Enterprises, Dragons, Lynxes and Memotechs lie ones and twos on trestle tables covered with leads, pamphlets, leads and more leads. Taken to their limits thorough endless customising to prove they were underestimated and could have ruled the world if only software companies had seen their potential. One could say they were the true vintage models on show – whether they're classics remains to be seen.

Adopting a much higher profile were the QLs and MSXs, machines with much higher specs and, presumably, much more to lose. Certainly on the



• Will the jumble sales of the future will look like this?

Incredible bargains abounded at the show and at time the stalls resemble hi-tech junk markets: Memotechs were on sale for £10, QL boards for £9, bits and pieces for a few pence...

Presumably most of them for spares (there must be more than £10 worth of chips these days inside the 256K Memotech); whatever, there were a lot of satisfied bargain hunters by the end of the day

520ST-FM SUPER PACK



1Mb DISK DRIVE £450 OF SOFTWARE ARCADE GAMES

Arkanoid II	Imagine	£19.95
Beyond The Ice Palace	Elite	£19.95
Black Lamp	Firebird	£19.95
Buggy Boy	Elite	£19.95
Chopper X	Mastertronic	£9.99
Ikarl Warriors	Elite	£14.95
Marble Madness	Electronic Arts	£24.95
Quadrilateral	Logotron	£19.95
Ranarama	Hewson Consultants	£19.95
Return To Genesis	Firebird	£19.95
Roadwars	Melbourne House	£19.95
Starquake	Mandarin	£19.95
Test Drive	Electronic Arts	£24.95
Thrust	Firebird	£9.95
Thundercats	Elite	£19.95
Wizball	Ocean	£19.95
Xenon	Melbourne House	£19.95
Zynaps	Hewson Consultants	£19.95

SPORTS SIMULATIONS

Eddie Edwards Super Skid	Elite	£19.95
Seconds Out	Tynesoft	£19.95
Summer Olympiad '88	Tynesoft	£19.95

PRODUCTIVITY SOFTWARE

Organiser	Triangle Publishing	£49.95
-----------	---------------------	--------

JOYSTICK

Atari CX40 Joystick	Atari Corp	£4.99
---------------------	------------	-------

FREE ATARI BUNDLE VALUE: £458.97

£399

INCLUDING VAT

With SM124 mono monitor: £498 INC VAT

With SC1224 colour monitor: £698 INC VAT

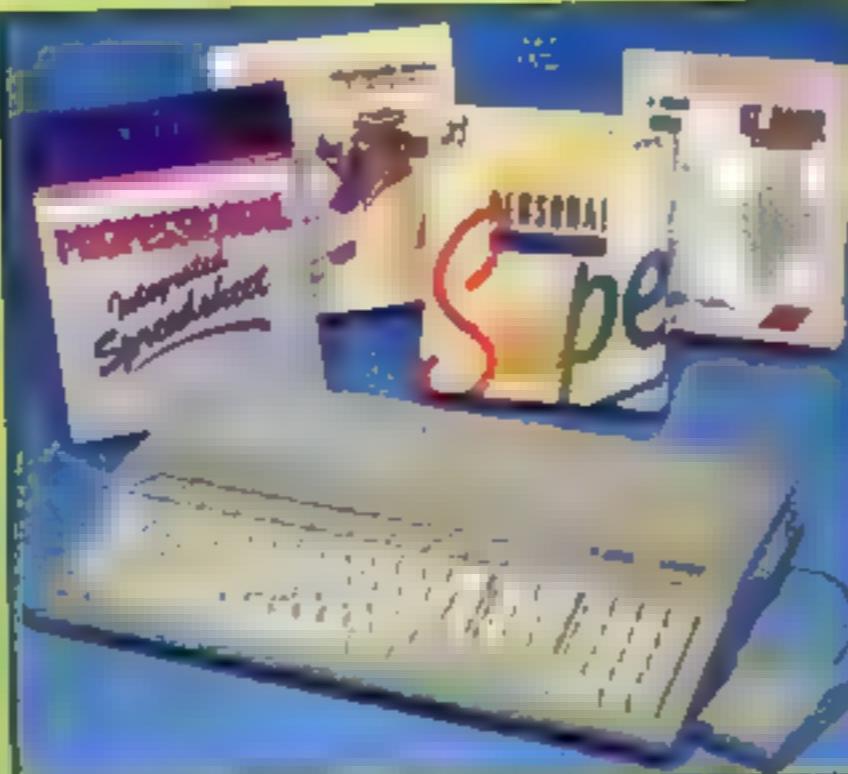
1040ST-FM PROFESSIONAL PACK

NOW WITH TV MODULATOR

For the serious home user and the small business, we are pleased to announce a new package based around the 1040ST-FM. The 1040ST-FM has 1Mbyte RAM and a 1Mbyte built-in disk drive. In addition, the 1040ST-FM now comes with a TV modulator built-in. (The previously available 1040ST-F was designed for use with a monitor only and did not come with a modulator.) This modulator allows the 1040ST-F to be plugged directly into any domestic TV set, and comes complete with a lead to allow you to do so. The new 'Professional Pack' from Silica includes the new 1040ST-FM with modulator plus four high quality software packages including a spreadsheet, database, word processor and programming language. This 'Professional Pack' software will enable you to get straight down to business with your new computer. In addition to this software (worth £384.84), if you buy the Professional Pack from Silica Shop, you will also receive the Silica ST Starter Kit (worth over £200). FREE OF CHARGE. Return the coupon for further information.

£499
INCLUDING VAT

With SM124 mono monitor: £598 INC VAT
With SC1224 colour monitor: £798 INC VAT



ATARI 1040ST-FM (Computer) £499.99
VIP PROFESSIONAL (Spreadsheet) £149.95
MICROSOFT WRITE (Word Processor) £149.95
SUPERBASE PERSONAL (Database) £59.95
BASIC DISK & MANUAL (Language) £24.95

NORMAL RRP: £884.82
LESS DISCOUNT: - £385.82
PROFESSIONAL PACK PRICE: £499.00

2Mb & 4Mb MEGA ST

The MEGA ST computers are styled as a lightweight keyboard with a separate CPU, connected by a coiled telephone style cable. There are two versions of the MEGA ST, one with 2Mbytes of RAM and the other with 4Mbytes. Each version has a 1Mbyte double sided disk drive built-in to the CPU unit. The MEGA ST's do not come with a modulator built-in and must therefore be used with a monitor. With every MEGA ST purchased, we will add the 'Professional Pack' software (worth £384.84) detailed above, plus the Silica ST Starter Kit (worth over £200), both FREE OF CHARGE. Return the coupon for further details.

2Mb MEGA ST
£899
NO VAT
+ mono monitor = £998
+ colour monitor = £1198

4Mb MEGA ST
£1199
NO VAT
+ mono monitor = £1298
+ colour monitor = £1498



DTP PageStream £149 +VAT
= £171.35

Desktop Publishing (DTP) is one of the fastest growing applications for personal computers. We are pleased to announce a powerful low cost package for the Atari ST called PageStream. PageStream costs only £149 (+VAT £171.35) and, because it works with an Atari 1040ST and a Seiko SP-100A printer, you can be up and running with a complete system for less than £1000. Some of the features of PageStream are listed to the right. If you would like further information on this program, complete and return the coupon below, ticking the DTP box in the corner.

- TEXT FLOW AROUND GRAPHICS
- ROTATION OF TEXT & GRAPHICS
- SLANT OR TWIST ANY OBJECT
- POSTSCRIPT COMPATIBLE
- TAG FUNCTION
- AUTO/MANUAL KERNING & HYPHENATION
- GROUPING OF OBJECTS

DO YOU OWN AN ATARI ST?

If you already own an Atari ST computer and would like to be registered on our mailing list as an ST user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist ST service that is second to none.

SILICA SHOP:

SIDCUP (& Mail Order) **01-309 1111**
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX
OPEN: MON-SAT 8am - 5.30pm LATE NIGHT: FRIDAY 9am - 7pm

LONDON **01-580 4000**
52 Tottenham Court Road, London, W1P 0BA
OPEN: MON-SAT 9.30am - 6.00pm LATE NIGHT: NONE

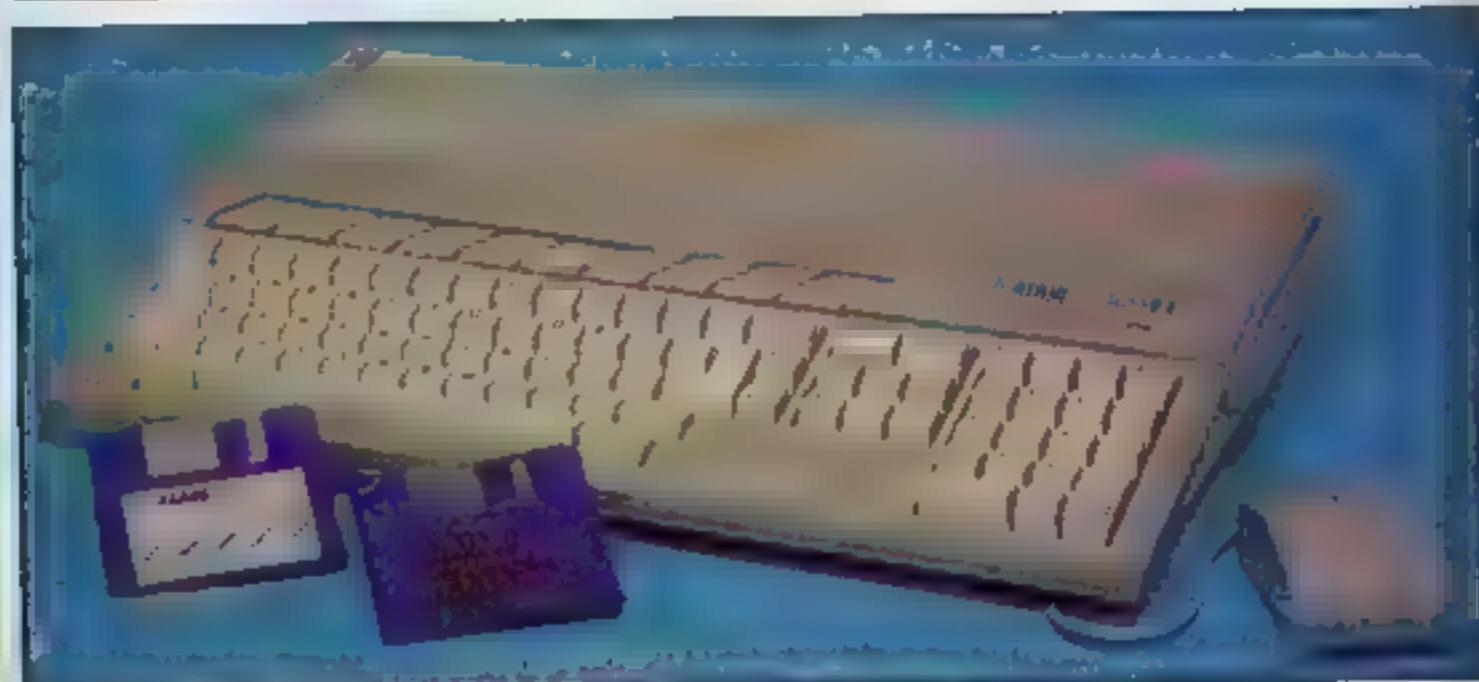
LONDON **01-629 1234 ext 3914**
Selfridges (1st floor), Oxford Street, London, W1A 1AB
OPEN: MON-SAT 9am - 6.00pm LATE NIGHT: THURSDAY 9am - 8pm

JUST ATARI ST COMPUTERS

The range of Atari ST computers offers something for everyone. From the games enthusiast who wants the challenge in the very best in arcade action, to the businessman who wants to make financial forecasts or faultless presentations. The ST offers high quality graphics, sound and speed for the gamer, whilst providing a fast, user friendly and affordable solution to business. The ST is now firmly established in the home environment and boasts a wealth of users in education, local government, television, and a variety of different businesses. Software for the range stretches to cover applications as diverse as ENTERTAINMENT, ACCOUNTS, ART, COMMUNICATIONS, COMPUTER AIDED DESIGN, DATABASES, DESKTOP PUBLISHING, EDUCATION, MUSIC, PROGRAMMING, SPREADSHEETS, WORD PROCESSING and more. For full list of the software available, as well as details of the ST range, complete and return the coupon below.

All prices correct at the time of going to press. EXC

520ST-FM EXPLORER PACK WITH BUILT-IN 1Mb DISK DRIVE



The value for money offered by the Atari ST range is reflected in the Explorer Pack featuring the 520ST-FM computer with 512K RAM. The 520ST-FM computer now comes with a built-in 1 Mb double sided disk drive as well as a free mouse controller and a built-in TV modulator. The new 520ST-FM Explorer Pack includes the 520ST-FM computer, the arcade game Ranarama, a tutorial program and some useful desktop accessories. In addition, if you buy the Explorer Pack from Silica, we will give you the Silica ST Starter Kit worth over £200, FREE OF CHARGE. Return the coupon for details of our Starter Kit and of the full ST range.

£260
ONLY £2.51 PER WEEK
RETURN COUPON FOR DETAILS
+ VAT = £299

+ SM124 mono monitor: £398 INC VAT
+ SC1224 colour monitor: £598 INC VAT

WHY SILICA SHOP?

Before you decide when to buy your new Atari ST computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer and expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Atari ST related products in the UK, a full time Atari ST specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established as the home computer field for ten years with an annual turnover in excess of £8 million and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. But don't just take our word for it. Complete and return the coupon below for our latest literature and begin experiencing the Silica Shop specialist Atari service.

**FREE SILICA STARTER KIT
WORTH OVER £200**
WITH EVERY ST - RETURN COUPON FOR DETAILS
ALL PRICES QUOTED INCLUDE FREE UK DELIVERY

To: Silica Shop Ltd, Dept NCE 0489

PLEASE SEND FREE LITERATURE ON THE ATARI ST

Mr/Mrs/Ms: Initials: Surname:

Address:

Do you already own a computer? If so, which one do you own?

Postcode:

Dept NCE 0489

DTP

ALTERNATIVE MICRO SHOW

REPORT

QL front, the market would seem to very healthy – currently the QL looks to be turning into a PC. There's the German firm, Ultrasoft, showing off its PC-style keyboard and Digital Precision demoing *The Solution* – a PC emulator claimed to run selected software 15% faster than an XT – whilst elsewhere a QL was sending text files via a Psion Organiser to the only Atari ST at the show and receiving them from a PC. Since the QL is so versatile, has sold 100,000 and can be picked up for £80 brand new, it's a wonder why it's featured here at all.

For although entry to the Alternative Show would seem to depend on a machine having ceased production, the complete absence of any BBCs tends to suggest it's largely up to user groups to define the point at which their machine becomes 'alternative'. Granted, the Beeb sold well



• Every machine you see is pulled apart and wired up to something, and everyone seems to have a screwdriver and soldering iron in their top pocket. At the slightest squeak or flicker, off comes the back, out comes the soldering iron and off they go. Sometimes they seem to want things to go wrong...



over half a million; and judging by The Software Show on the box, you'd imagine it to remain the ultimate computer, capable of out-performing a Cray. But in terms of specification there were machines here representing far better value for money.

So the litmus test for 'alternative' is probably more concerned with lack of software support. Stall after stall told the same story – brilliant machine at the time but the market was wrong... no software... it died in death.

Meanwhile, refusing to lie down and play dead, the MSX still sheds its gamesy image; there's desk top publishing, video titling and modems left right and centre. Rumours of a 16-bit, MSX 3 abound and there's talk of the MSX 2+ finally making an appearance for around £350.

But then all the machines here have new software coming out for them. Sure it's no stream, just a steady flow – but how about a MIDI interface for the Einstein, or a Speech Synthesizer for the Oric? Or for that matter, dBase II, WordStar v.4.0 and MultiPlan for the Adam?

The Adam? Yes the Adam. An add-on to the Colecovision Games Console produced by CBS and consisting of a Z80 with 64k RAM, with both double sided 3.5 inch and 5.25 inch disc drives supported and capable of running industry standard PC applications in conjunction with a 256k memory board. Never heard of it? Neither had we. It hasn't been manufactured for years.

Which brings us to the real question. Why do these people retain a love – and it must be love – for a piece of hardware that's way behind the times, short on spares and bereft of any significant software advances? Is it masochistic denial, dreamy nostalgia, the joy of tinkering or the need to prove a point? Better just put it down to the peculiarly British obsession with clubs and memorabilia. Ever been to a local library and read through the mass of listed clubs? You'd be surprised. •

S COMPUTER SYSTEMS

All our disks are "CIS" Branded Disks with Lifetime Guarantee.
All our disks come with a FREE Clear Deluxe Library Case.

	10	20	50	100+
5.25" DS/DD 48tpi	7.99	7.75	7.29	7.05
DS/DD 96tpi	9.59	9.25	8.90	8.54
DS/DD 96tpi	14.49	14.15	13.79	12.50
3.5" DS/DD 135tpi	14.15	13.69	13.34	12.98

INTRODUCTORY OFFER.
For every 5 Boxes of same disks purchased in a single order,
we will give one Box FREE

All our prices include VAT and Carriage.
(orders less than £15.00 Add £1.00 P&P)

We can also supply Disk Boxes, Joysticks, Mouse Mats.
Dust Covers and other accessories at competitive prices.
Phone or write for a Price List.

All Cheques/P.O. Payable to:
S&H Computer Systems
11 Hempstead Lane, Potten End
Berkhamsted, Herts, HP4 2QJ



FOR GENERAL ENQUIRIES AND FOR LARGER DISCOUNTS PHONE:
0737 833136 24 Hrs

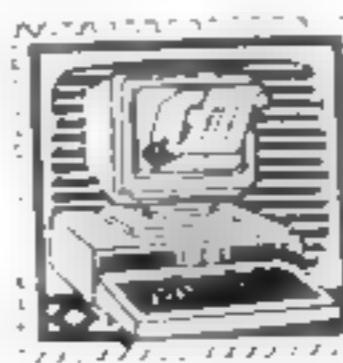
Prices may be subject to change without notice.

E. & O.E.

MAKE YOUR MICRO EARN!

Yes making money becomes incidental when you know how. Your micro is, if only you knew it, a gold mine. The size and make is irrelevant. Make the initial effort NOW by starting your own HOME BASED BUSINESS

This may be the most important move you will ever make!
REMEMBER: You'll never get rich by digging someone else's "ditch". Anyone in the country, including YOU, can become very rich in a relatively short period of time just by doing a few basic things! It's more rewarding than playing games. The benefits are many and varied. Full or part time. For FREE details send S.A.E. to:



HOME BASED BUSINESS
31 PILTON PLACE (NCE 2)
KING AND QUEEN STREET
WALWORTH, LONDON SE17 1DR

COMPUTER REPAIRS

Fixed Super Low Prices!

Inclusive of parts, labour and VAT

1 WEEK TURNAROUND



FIRST AID
FOR
TECHNOLOGY

* AMSTRAD / SINCLAIR AUTHORISED *

SPECTRUM 48K	£14 + Free Game	C64	£22 + Free Game
SPECTRUM 128	£18	VIC 20, C4+	£22
SPECTRUM +2	£27	1541 DISK DRIVE	£36
C128	£29	C2N TDECK	£19
C16	£18		

Please enclose payment with item - 3 month warranty on repair
Please enclose advert with repair

W.T.S. ELECTRONICS LTD

(NCE 300389)

Studio Master House, Chaulend Lane, Luton, Beds. LU4 8EZ

Tel: 0582 491949

(4 lines)

Standard terms of business apply



Evesham

MICROS

WE ACCEPT
EXPRESS
VOUCHERS

All prices include VAT and Delivery



• 520STFM SUPER PACK

Includes STFM with 1MEG drive, 21 games with business software (worth over £450) & joystick.

Only £329.00

520 STFM latest version with 1MEG drive fitted	£269.00
1040 STFM including TV modulator	£399.00
1040 STFM model as above, with 'Microsoft Write' & 'VIP Professional'	£419.00
1040 STFM model as above, including 21 games, business software and joystick as supplied with above '520 STFM Super Pack'	£419.00
1040 STFM as above with super pack extras, with 'MS-Write' & 'VIP Pro' ..	£459.00
Buy any 1040 STFM model with a monochrome monitor for only £110.00 extra	
Mega ST1 with mono monitor, 'Microsoft Write' and 'VIP Professional'	£599.00
Mega ST2 with mono monitor, 'Microsoft Write' and 'VIP Professional'	£849.00
Mega ST4 with mono monitor, 'Microsoft Write' and 'VIP Professional'	£1099.00
'Super Pack' Software, as supplied with above 520STFM offer	£80.00
SLM804 laser printer, great value at	£1099.00
SM124/5 mono monitor	£119.00
Mega-File 30Mb hard disk	£539.00
Mega ST2 package - includes Mega ST2, mono monitor, external 1Mb 3.5" drive, SLM804 laser, 'MS-Write', 'VIP Pro.', 'Fleet St Publisher' and 90 days on site maintenance	£1795.00
Atari DTP system - (Mega ST4/MM/SLM804/30MB HD/S/WARE)	£2795.00
System AT40 40MB Hard Disk, super bargain value at only	£469.00
5.25" External drive 40/80 track 360/720K formatted capacity	£159.95
Pye 1185 15" FST Teletext TV/Monitor Inc. full remote control and cable	£269.00
Philips CM8833 colour monitor c/w ST or Amiga cable	£229.00
Philips CM8852 as above, higher resolution	£299.00

commodore hardware

NEW SPECIAL OFFER AMIGA PACK

Specially priced Amiga 500 package including the following:

★ Amiga 500 computer	★ Hostages	★ Winter Olympiad
★ TV Modulator	★ Zynaps	★ Eliminator
★ Mouse & Mouse mat	★ Quadratics	★ Backlash
★ Joystick	★ Splitting Image	★ plus 5 disks of public domain software
★ Purple Saturn Day	★ Stargaze	
all for only £399.00		
Amiga 500 computer including TV modulator	£359.00	
Oceanic OC-118 64/128 disk drive for 64/128 with free GEOS software	£129.95	
Freeze Machine complete backup cartridge, with integral reset button	£28.95	
LC-10 commodore 64/128 ready printer inc. 2 extra black ribbons free	£199.00	
LC-10 7-colour version of above printer inc. 2 extra black ribbons	£249.00	

Amiga & ST 3.5" Drives

- ★ Very Quiet
- ★ Slimline Styling
- ★ Fully Compatible
- ★ Top quality Citizen drive mechanism
- ★ On/Off switch for Amiga
- ★ External plug-in PSU for ST
- ★ Throughport for Amiga
- ★ 1Mb unformatted capacity

Fully compatible, high quality 3.5" external drives for the ST and Amiga

Amiga version only £79.95

Atari ST version only £82.95

Prices include VAT & delivery

Western Digital Filecards

Upgrading your PC to hard disk? Look no further, we offer the best prices on top quality hardcards. Thorough documentation supplied, low power consumption, with free XTree file management software and Speedread. For Amstrad PC1512/1640 users we supply hardcards tested and formatted, with our simple software installation procedure. The best packages available!

20MB...£209.00 32MB...£229.00 40MB...£289.00

DISECTOR ST V5

for all Atari ST models
only £28.95

New Version 5 disk utilities for the ST, features include: protected software backup, incorporating turbo nibbler, a very fast and powerful copier, which uses all available drives & memory and includes 80 parameter options for handling a greater range of software; drive B boot allowing many programs to startup from drive B; organiser accessory providing many major disk management commands; special formatters giving up to 25% extra user storage per 3.5" disk and accelerating access speed by up to 30%; fast backup version 2 copies standard disks speedily; ramdisk accessory; undelete file; PLUS much, much more!

3.5" disks

10...£11.95 in plastic case £13.95
25...£27.95 in 40 cap case £34.95

Fully guaranteed double sided media

5.25" disks

25...£13.95 in 50 cap box £22.95
in 100 cap box £24.95

Fully guaranteed double sided media

Amstrad PC1512/1640/2086

We offer a wide choice of Amstrad PCs with many upgrade options, including the very latest PC2086 range. For the hard disk option, check our 'Evesham Upgraded Models'. Only the best will do - so we normally upgrade by means of a Western Digital Filecard, which includes XTree and SpeedRead software; however on single drive 1512/1640 models we can offer Internal Installations at the same price (leaving more expansion room but no upgrade opportunity for a 2nd floppy drive). On-site service contracts are available on any PC1512/1640 model for only £39.00 inc.VAT. Prices ■ lighter type exclude VAT.

Free with 1512 models... Ability and 4 US Gold Games

	SD	DD	AMS H.D.	SD 20MEG	DD 20MEG	SD 32MEG	DD 32MEG
EVE SHAM UPGRADED MODELS							
MONO 1512	384.35 442.00	477.39 548.00	N/A N/A	574.78 661.00	667.83 768.00	592.17 681.00	665.22 788.00
COLOUR 1512	494.78 569.00	555.85 638.00	N/A N/A	885.22 788.00	746.09 858.00	702.81 808.00	783.48 878.00
MONO 1640	474.78 548.00	555.85 638.00	738.26 849.00	665.22 868.00	746.09 868.00	682.61 785.00	763.48 878.00
CGA colour 1640	581.74 656.00	651.30 749.00	825.22 949.00	772.17 868.00	841.74 968.00	789.57 908.00	859.13 988.00
EQA (ECD) 1640	677.39 778.00	738.26 849.00	938.26 1078.00	867.83 988.00	928.70 1068.00	885.22 1018.00	946.09 1088.00
2086	578.28 665.00	686.93 790.00	917.39 1055.00	785.70 884.00	877.39 1008.00	786.09 904.00	894.78 1028.00
2086 CD	717.38 825.00	826.22 949.00	1056.52 1215.00	907.83 1044.00	1016.85 1168.00	925.22 1064.00	1033.04 1188.00
2086 12" HRCD	808.70 930.00	920.00 1058.00	1147.83 1320.00	999.13 1148.00	1110.43 1277.00	1018.52 1168.00	1127.83 1267.00
2086 14" HRCD	900.87 1036.00	1012.17 1164.00	1241.74 1428.00	1091.30 1255.00	1202.81 1383.00	1108.70 1275.00	1220.00 1403.00

PC1512 special offer Buy an Amstrad DMP3160 10" carriage 9pin printer with any PC1512 model for only £120.00 extra !

optional extras

1512 memory upgrade to 640K	£39.95	Enhancer 101 replacement keyboard ...	£74.95
Maths Co-processor 8087-2	£129.00	3.5" drive (720K) for SD models	£79.95
NEC V30 (8086 replacement)	£24.95	PC2000 series compatible	
Cipher CT1525 tape streamer	£31.99	5.25" (360K) external drive	£100.00
Amstrad Modem Card V21/23	£99.00	Joystick & Controller Card	
Amstrad MC2400 Modem Card	£199.00	self centering analog type	£34.95

Amstrad PPCs

Low prices on all portable PCs - especially twin drive models
prices in brackets are excluding VAT

PPC512S	(£373.04)	£429.00	PPC640S	(£477.39)	£549.00
PPC512D	(£433.91)	£499.00	PPC640D	(£546.96)	£629.00

New low price External 3.5" floppy drive (720K) to suit ANY Amstrad 1512 1640 inc. DD and HD models! Uses no expansion slots £99.95

Central Point Software

For all your PC disk management requirements

PC Tools Deluxe Version 5... Other utilities may claim to 'do it all' but only PC Tools Deluxe is the complete disk utility package, providing a fast hard disk backup, the best undelete available, 100% safe formatting of floppy and hard disks, unformat, reliable disk caching, compress facility, in fact everything required ■ manage & protect your data at a sensible price.....£49.95

Copy II PC Version 5..... The most effective floppy disk backup utility of its type. We always ship the latest version. Can also transfer many programs to hard disk and then run them without reference to floppy. Supports both 5.25" and 3.5" disk format. Don't be without it.....£24.95

Copy II Deluxe Option Board.... The ultimate solution to backing up copy-protected software using the hardware option. All the original features ■ the Option Board, including the most powerful backup copier product on the market, and can even transform any PC equipped with a 3.5" drive into a dual purpose IBM/Macintosh drive. Allows your PC to read and write to MAC data disks easily through DOS. Comes as an easy-to-fit short card.....£84.95

PRINTERS

All prices include VAT, delivery and cable



We use and recommend Star printers since they do offer an unbeatable combination of features, print quality, reliability and value. Make the sensible decision ■ get it right with a Star printer at our special, all in, prices.

Star LC10 best-selling 144/360cps printer, 4 NLQ fonts, inc. 2 extra ribbons free ..	£199.00
Star LC10 7-colour version of above printer, inc. 2 extra	

Pros and Cons

After their fall from grace in the mid '80s, games consoles are back in vogue. With inconsolable desire, Rik Haynes jacks into the current crop of decks and plays out the best game carts around...

The first wave of consoles attracted countless followers at the start of the decade, with console owners rejoicing the ability to play the classic coin-ops Space Invaders, Asteroids and Defender in their own home. With the advent of the micro however, things started to change. People wanted to learn about computers and even have the audacity to program their own games. In such a hostile climate, the console died a quick and lonely death.

But now things have started to change. Sure some people still want to use a micro to learn computing, but the new generation of kids and hardened gamesters want the immediate access to software that cartridges bring, and the thrills provided by the new generation of consoles and their up-to-date, faithful conversions of the latest coin-op favourites.

This state of affairs shows no signs of ceasing, either, as this year has seen the release of the first 16-bit console in Japan, a console produced in the UK and even rumours of Atari producing a console based on the ST...

HARDWARE

Sega Master System

The most popular new generation console in the UK today, the Master System's strength lies in its manufacturer also being the leading coin-op producer. Thus it gets all the latest arcade hits before any other micro or console. This jump on the other decks is reinforced by the fact that the Master System's coin-op conversions are normally superior to the 8-bit - and sometimes 16-bit - micro versions, in both audio-visual and gameplay terms.



● Master System £80

Console, two game controllers, TV connector, Hang-on Smart Card game

● Master System Plus £100

Console, Light Phaser, two game controllers, TV connector, Safari Hunt Cartridge game, Hang-on Smart Card game

● Super System £130

Console, 3D glasses, Light Phaser, two game controllers, TV connector, Missile Defence Cartridge game

● Software

Cartridge £20 - £30 • Smart Card £15

● Visuals

Resolution 256x192 • Palette 64 • Display TV only

● Audio

Sound channels 3 • Stereo No

NEC PC Engine

Distributed in UK by Micromedia on 0584 75604

Only recently officially launched in the UK, this



little cyber baby is the current last word in console entertainment. Containing some serious custom-designed graphics and sound chips, the Engine produces coin-op quality audio-visuals, beating even the Amiga as its software currently stands.

● SCART PC ENGINE £200

Console, one game controller, Scart/Euro monitor connector

● PAL PC ENGINE £225

Console, one game controller, TV connector

● Software

Cartridge £30

● Visuals

Resolution 320x256 • Palette 512 • Display SCART Monitor or TV (see above)

● Audio

Sound channels 6 • Stereo No

Nintendo Entertainment System

A phenomenal success in Japan and USA, the Nintendo hasn't made any great impression on the UK front yet - perhaps the recent Dixons deal will change all this. Whatever happens, the Nintendo will still attract a huge software support in the US. Whether or not UK users will benefit



from this depends on how many units are sold here this year.

● Standard Model £100

Console, two game controllers, TV connector, Super Mario Brothers Cartridge game

● Deluxe Model £150

Console, ROB (Robotic Operated Buddy) robot, light gun, two game controllers, TV connector, two Cartridge games

● Software

Cartridge £20 - £30

● Visuals

Resolution 256x240 • Palette 52 • Display TV Only

● Audio

Sound channels 3 • Stereo No

Atari Video Computer System

The only survivor from the first batch of consoles

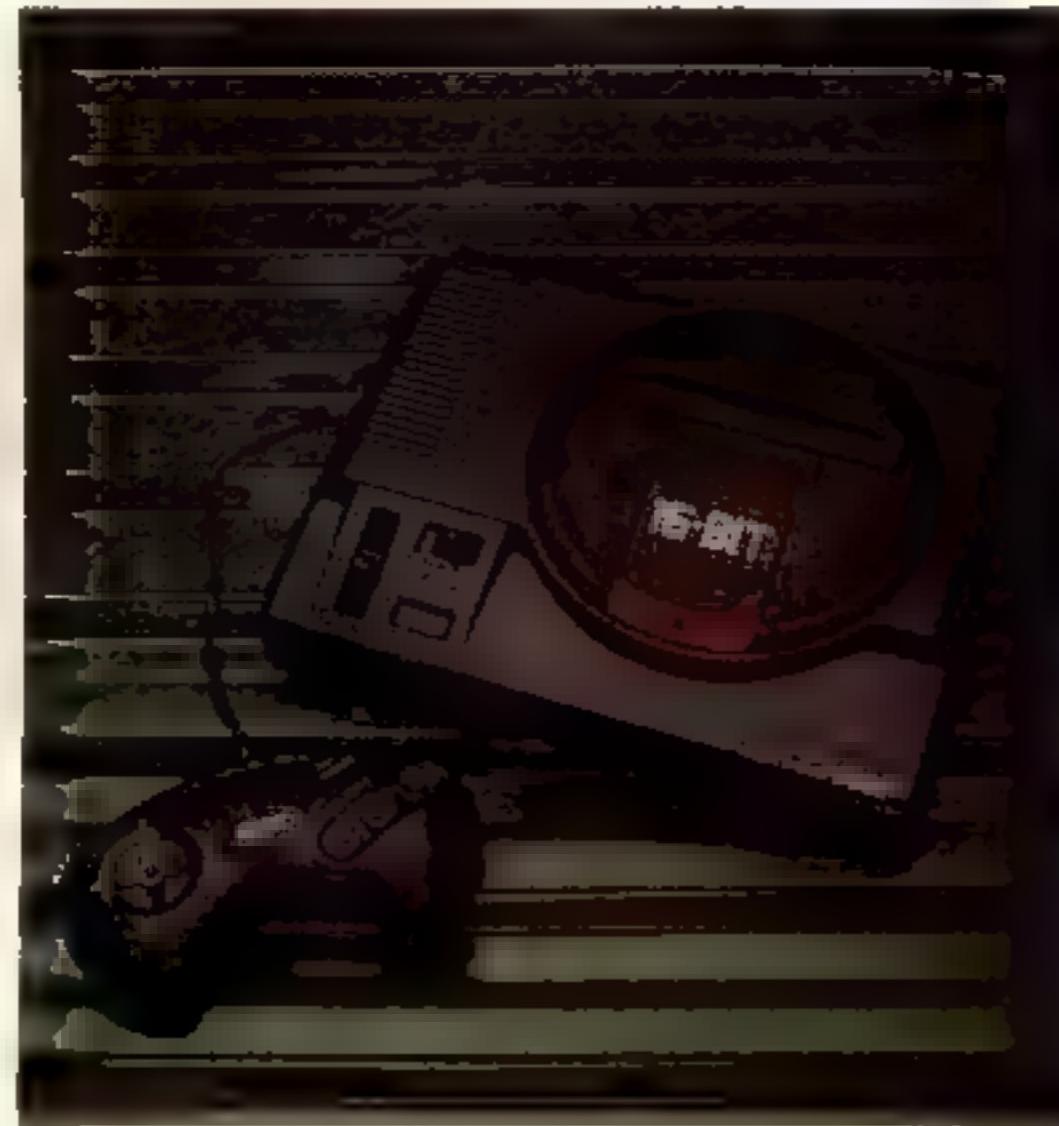


back in the early '80s, the VCS certainly looks its age when up against the likes of the PC Engine or Megadrive. However, its age is also its ally when considering its cheap price and the large amount of games that have been released for it over the last decade. The only trouble with VCS games is that they're hard to find and audio-visually primitive.

- **Atari 2600 VCS £50**
Console, Joystick, TV connector, 5 cartridge games.
- **Software**
Cartridge £10 - £20
- **Visuals**
Resolution 160x192 • Palette 16 • Display TV Only
- **Audio**
Sound channels 3 • Stereo No

Sega Megadrive

After two years of development, Sega finally



launched the world's first 16-bit console in Japan earlier this year. The Megadrive is a totally cyber deck packing an 8 MHz 68000 main processor, 4 MHz Z80 co-processor, advanced custom graphics chip with 64K of Video RAM giving a full-screen display of 64 colours on-screen from a palette of 512, and FM stereo output complete with headphone socket. An extra £20 will get you the adaptor needed to run Sega Master System carts. Due out in the UK later this year from Virgin/Mastertronic (price not yet confirmed), Megadrive is already being grey-imported by certain high-street retailers for the heavyweight sum of £250 (it costs £85 in Japan).

Konix Multi System

Unveiled at this year's Toy Fair at Earls Court, the Konix console represents a whole series of firsts



in the console industry, the most important probably being its revolutionary design allowing the controller to be turned into a steering wheel, yoke or handlebar. Other changes from the normal console spec come in the form of it using disk rather than cartridge-based software, and its ability to hook up to a full-size hydraulic chair. Multi System is due for release later this year at around £200.

SOFTWARE

The best game buys currently on sale for each deck...

Sega Master System

- **Space Harrier £25**
One of the best 8-bit incarnations of this classic coin-op, containing bright colourful graphics and simple – but addictive – head-on shoot-'em-up action.
- **Out Run £25**
Without a doubt, the best home conversion of this popular racing coin-op, with you in control of an open-top Ferrari Testarossa.
- **Wonderboy £20**
A cutie platform-type game with wonderful visuals marking another brilliant coin-op conversion on the Master System.

- **R-Type £30**
Overshadowed by the superlative PC Engine version, this version still gives the micro versions a run for their money.
- **Double Dragon £25**
A highly playable horizontally-scrolling kick-'em-to-death-'em-up.
- **Shinobi £25**
The first home version of this popular martial-arts coin-op.

NEC PC Engine

- **R-Type £30**
Spectacular horizontally-scrolling shoot-'em-up with an



• R-Type's best showing yet, courtesy of the PC Engine

amazing coin-op feel in both gameplay and audio-visuals.

- **R-Type II £30**
More of the same... only this time a lot harder!
- **Galaga 88 £30**
Nostalgic, but infuriatingly addictive, throw back to the Galaxian-inspired shoot-'em-up.
- **Victory Run £30**
A racing-sim in from the Out Run school of driving.
- **Vigilante £30**
Double Dragon style fist 'n' kicking action.



• Space Harrier II on the Sega Megadrive

Space Harrier £30

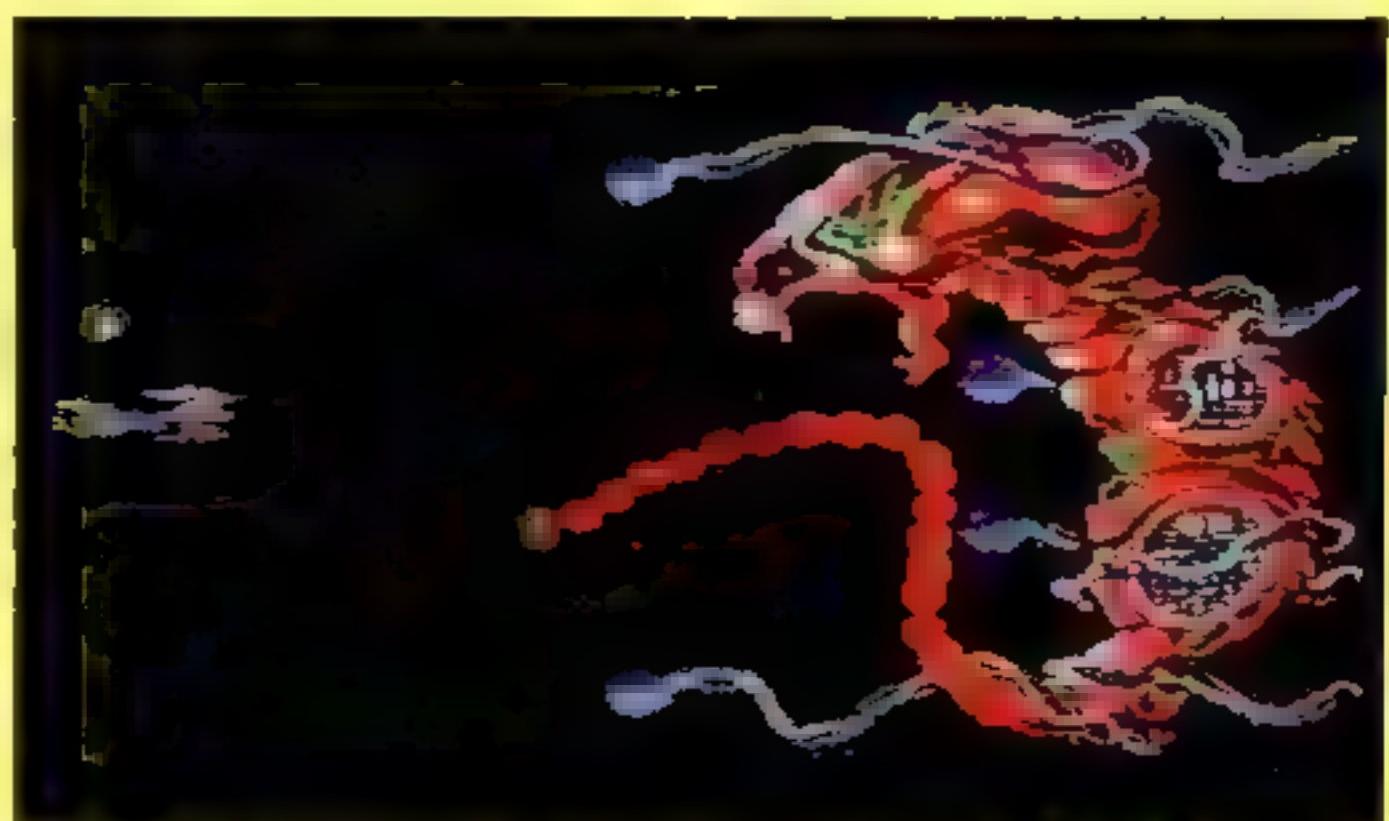
This game pops up everywhere...

Nintendo Entertainment System

- **Super Mario Bros £25**
Playable platform action.
- **Gradius £25**
Nemesis inspired horizontally-scrolling shoot-'em-up.
- **Donkey Kong £20**
The coin-op that started the platform revolution.
- **Mike Tyson's Punch Out £30**
Frank Bruno is nowhere to be seen!
- **Castlevania £30**
There's a surprise! Another platform game on the Nintendo!
- **Top Gun £30**
Flight-simulator based around the infamous F-14 Tomcat.

Atari VCS

- **Space Invaders (Price varies)**
The game that launched a thousand coin-ops.
- **Asteroids (Price varies)**
Originally the first vector graphic coin-op, the VCS version uses solid asteroids for you to blast away.
- **Star Raiders (Price varies)**
Space-sim conversion from the 8-bit Atari computer.
- **Summer Games (Price varies)**
Summer sports-sim events.
- **Winter Games (Price varies)**
Winter sports-sim events.
- **Outlaw (Price varies)**
Simple but brilliant gunfighting combat.



• Master System R-Type: Behind the PC Engine, but streets ahead in the micro versions

AMSTRAD COMPUTERS

PC1512 SD Mono	£485
PC1512 DD Mono	£570
PC1512 SD Colour	£570
PC1512 DD Colour	£665

PC 1512 range include DMP 3160 Printer, Operating System, Migenet Ability and Four US Gold Games

AMSTRAD PC1640

PC1640 SD Mono	£485
PC1640 DD Mono	£555
PC1640 SD Colour	£555
PC1640 DD Colour	£650
PC1640 SD ECD	£650
PC1640 DD ECD	£735

GENUINE AMSTRAD 20 MB HARD DISK MACHINES

PC1640 HD20 Mono	£715
PC1640 HD20 Colour	£810
PC1640 HD20 ECD	£899

AMSTRAD PORTABLES

PPC512S Single Drive	£385
PPC512D Double Drive	£475
PPC640S SD with modem	£459
PPC640D DD with modem	£575

AMSTRAD PC2086

PC2086 SD12/MD	£570
PC2086 SD14/CD	£720
PC2086 SD12/HRCD	£795
PC2086 SD14/HRCD	£890
PC2086 DD12/MD	£690
PC2086 DD14/CD	£845
PC2086 DD14/HRCD	£935
PC2086 HD12/MD	£935
PC2086 HD14/CD	£1075
PC2086 HD12/HRCD	£1125
PC2086 HD14/HRCD	£1265

EPSON COMPUTERS

PC PortableT/Floppy	£935
PC Portable 20 meg H/D	£1495
PCE Single Floppy	£595
PCE 20 meg Mono Mon	£895
PCAX 20 meg	£1198
PCAX 40 meg	£1495
PCAX 80 meg	£1895

COMPAQ OPUS TOSHIBA

Full Range available call for details

PC ADD-ONS

DRam Chips Tapestreamers Maths Co-Processors Hard Cards Call

VISUAL DISPLAY UNITS**QUME**

QVT 101	£275
QVT 101 Plus	£325
QVT 203	£365
QVT 119	£395

WYSE

WY-30	£265
WY-50	£335
WY-60	£415
WY-85	£385
WY-350	£450
WY-120	£395

INKJET PRINTERS

Epson SQ 2500	£975
HP Thinkjet	£315
HP Quietjet	£355
HP Quietjet Plus	£425
HP Deskjet	£685
HP Paintjet	£850
HP Ruggedwriter	Call

PLOTTERS

HP7440 (A4) 6 Pen	£715
HP7475 (A4/A3) 6 Pen	£1095
Hitachi 672 XD 6 Pen	£525
Hitachi 673 BM	£825
Roland DXY 880A A3	£565
Roland DXY 1100 A3	£635
Roland DXY 1200 A3	£885
Roland DXY 1300	£1035

PLOTTER ACCESSORIES

Pens Paper etc Call

LASER PRINTERS

Canon Series 11	£1575
Canon Series 11 T/B	Call
Brother HL-8	£1595
Epson GQ3500	£1195
Epson GQ3500 Twin Bin	£1375
HP Laserjet 11	£1495
HP Laserjet 11 T/Bin	£2350
OKI Laserline	£1350
Panasonic KX-P4450 T/Bin	£1495
Crystalprint WP	£895
Crystalprint Ser 11	£1295
Qume Scripten	£3495
Star LBP 8	£1395
Texas Instruments 2015	£3995
Texas Instrument 2108	£4050
Texas Instruments 2115	£4995

LASER ACCESSORIES

Memory Upgrade, Font Cartridge, Toner Cartridge, Developer Units, Additional Trays Etc Call

DOT MATRIX PRINTERS**EPSON**

LX800 150cps 25LQ	£169
FX850 220cps 45NLQ	£325
FX1050 220cps 45NLQ	£425
EX800 250cps 50LQ	£455
EX 1000 132col	£565
DFX 5000 533cps 96NLQ	£1295
LQ500 150cps 50LQ	£276
LQ850 220cps 73LQ	£477
LQ1050 220cps 73LQ	£595
LQ2500+ 132col 90cpsLQ	£765
LQ2550 400cps 132LQ	£950

BROTHER

1109 100cps 25NLQ	£155
1209 140cps 35NLQ	£215
1409 180cps 45NLQ	£345
2518 DUAL 360cps 75NLQ	£725
4018 480cps 100NLQ	£1195
M3524 432cps Colour LQ	£1255

STAR

LC10 Black 144eps 36NLQ	£169
LC10 Colour	£199
LC2410 170cps 57LQ	£279
NB24-10 216cps 72LQ	£434
NX-15 136col 120/30NLQ	£286
NR-10 80col 240/60NLQ	£369
ND-10 80col 180/45NLQ	£299
NR-15 136col 240/60NLQ	£425
ND-15 136col 180/45NLQ	£355
NB-15 136col 300/100LQ	£695

PANASONIC

KX-P1081 80col 120/27NLQ	£139
KX-P1180 80col 160/32NLQ	£175
KX-P1124 80col 160/53LQ	£279
KX-P1592 136col 180/38NLQ	£289
KX-P1595 136col 240/51NLQ	£395
KX-P1540 136col 240/80LQ	£475

FACSIMILES

JT Fax Card	£299
Telecom CF9.....	£895
Canon F110.....	£995
Canon 230.....	Call
Ricoh 10.....	£1150
Ricoh 20.....	£1525
Panafax UF150	£995

SOFTWARE**DTP & GRAPHICS**

Ventura V2.....	£540
Gem Desk Top Publisher	£199
Fleet Street Editor V3	£110
Page Ability	£139
Timeworks DTP.....	£77
Aldus Pagemaker	£499
Ghostscript	£195

WORD PROCESSORS

Wordperfect V4.2	£275
Wordstar Express	£69
Gem First Word +	£55
Gem First Word +	£145
Wordstar 2000	£265
Wordstar v5	£250
PC Write Sage	£75
New Word	£75
Multimate Advantage 2	£345
Microsoft Word	£295

DATABASES

Paradox V 2.01	£295
Sage Retrieve	£60
VP Info	£75
PC Promise	£62
Masterfile PC	£45
DBase 2 (1512)	£60
DBase 3 Plus	£320
Superbase Personal V2	£60
Tas Plus	£85
Rapid File	£195

ACCOUNTS PACKAGE

Sage Bookkeeper	£75
Sage Accountant	£105
Sage Accountant Plus	£145
Sage Payroll 11	£110
Sage Financial Controller	£215
Map Integrated Account	£125
Map Payroll	£75
Map Complete Accounts	£230
Accountability	£65
Accounts Master	£110

SPREAD SHEETS

Quattro	£135
VP Planner Plus	£104
Multiplan Junior	£45
Multiplan (Microsoft)	£120
Words & Figures	£70
Supercalc 3.21	£55
Sage PC Planner	£75
Lotus 123	£265
Supercalc V5	Call

DISKETTES

Amstrad 3" Disks..... £25.00

SONY

3.5 SS/DD MFD-1DD	£12.00
3.5 DS/DD MFD-2DD	£16.00
3.5 DS/DD MFD-2HD	£39.00
5.25 SS/DD MD-1D 48TPI	£8.50
5.25 DS/DD MD-2D 48TPI	£9.00
5.25 DS/DD 96TPI	£13.00
5.25 DS/DD 96TPI	£16.00

RIBBONS

Amstrad DMP 3000	£3.80
Amstrad DMP 4000	£4.90
Amstrad LQ3500	£5.80
Brother EM200	£4.00
Brother HR15 M/S	£3.85
Brother HR15/25 FN	£4.50
Brother M1009/1109	£3.65
Brother M1509/1709	£6.50
Brother M1409	£4.95
Canon PW1080A	£3.35
Citizen MSP10/20	£5.45
Citizen 120D/LSP10	£3.60
Epson MX80/FX80/85	£2.75
Epson LX80/86	£2.75
Epson MX100/FX100	£3.75
Epson LQ1500	£5.50
Epson LQ800/LQ850	£3.95
Epson EX800/EX1000	£3.95
Epson LQ1000/LQ1050	4.95
Juki 6100 SS	£1.85
Juki 6100MS	£3.95
Juki 62/6300MS	£2.29
Juki 62/6300FN	£3.25
Juki 5510/20	£3.65
Oki ML 82/83	£1.45
Oki ML 84	£2.75
Oki ML 182/192/193	£5.45
Olivetti Easycart MS	£14.95
Olivetti ET cart	£7.75
Olivetti Packart 1	£6.25
Panasonic 1080/1081/1082	£7.95
Panasonic Coloured Ribs	£9.35
Panasonic 1180	£7.95
Panasonic 1124	£7.95
Panasonic KXP3131	£2.29
Panasonic KXP1595	£7.95
Panasonic KXP 1540	£9.95
Star LC10 BLK	£4.00
Star LC10 Col	£6.00
Star LC2410	£5.00
Star NL10	£4.90
Star NR10	£4.90
Star NX15	£8.00
Star NB24/NB15	£7.90
NEC P6	£8.00
NEC P7	£9.00
NEC 2200	£5.70
Seikosha GP50	£5.20
Seikosha GP80	£1.90

RIBBONS Cont'd

Seikosha GP100/250	£2.65
Seikosha GP 500/550	£3.00
Shinwa CP80 M/S	£2.70
Qume/DWP 1120 MS	£2.65
Qume/DWP 1120 Nylon	£4.10
Daisystep 2000 M/S	£2.45
MT Tally MT80	£2.95
MT 100/120/160	£4.50
MT 460/490	£4.25
MT 420/440	£2.50
Ricoh 1300/1600 MS	£2.50
Ricoh 1300/1600 FN	£4.35

IBM Branded Supplies Available

PRINTWHEELS

Amstrad	£5.25
Brother	£18.00
Diablo 630 Plastic	£5.50
630 ECS	£24.00
630 Metal (GB)	£36.00
620 Xerox/Diablo	£15.50
Facit	£14.00
Hermes TOP 40	£30.00
NEC	£12.50
Olivetti UK/USA	£27.00
Olivetti USA/OPE	£34.00
Qume Plastic	£3.95
Ricoh (Compatible)	£19.00
Juki	£15.00

LASER CONSUMABLES

Brother Toner	£85
Canon Black Series 1	£85
Canon Black Series 2	£85
Centronics Toner Pack	£185
Citizen Toner	£25
Epson Toner	£18
Hewlett Packard Series 1	£75
Hewlett Packard Series 2	£75
Mannesmann Tally Toner	£28
Oki Laser 6 Toner	£18
Panasonic Toner	£32
Drum	£151
Qume Toner (6 Pack)	£225
Star Toner	£85
Texas Instruments Toner	£85

CABLES

All Types of Cables supplied.
Cables can be made to customers' specifications at short notice.

PAPER

We stock a wide selection of paper and labels

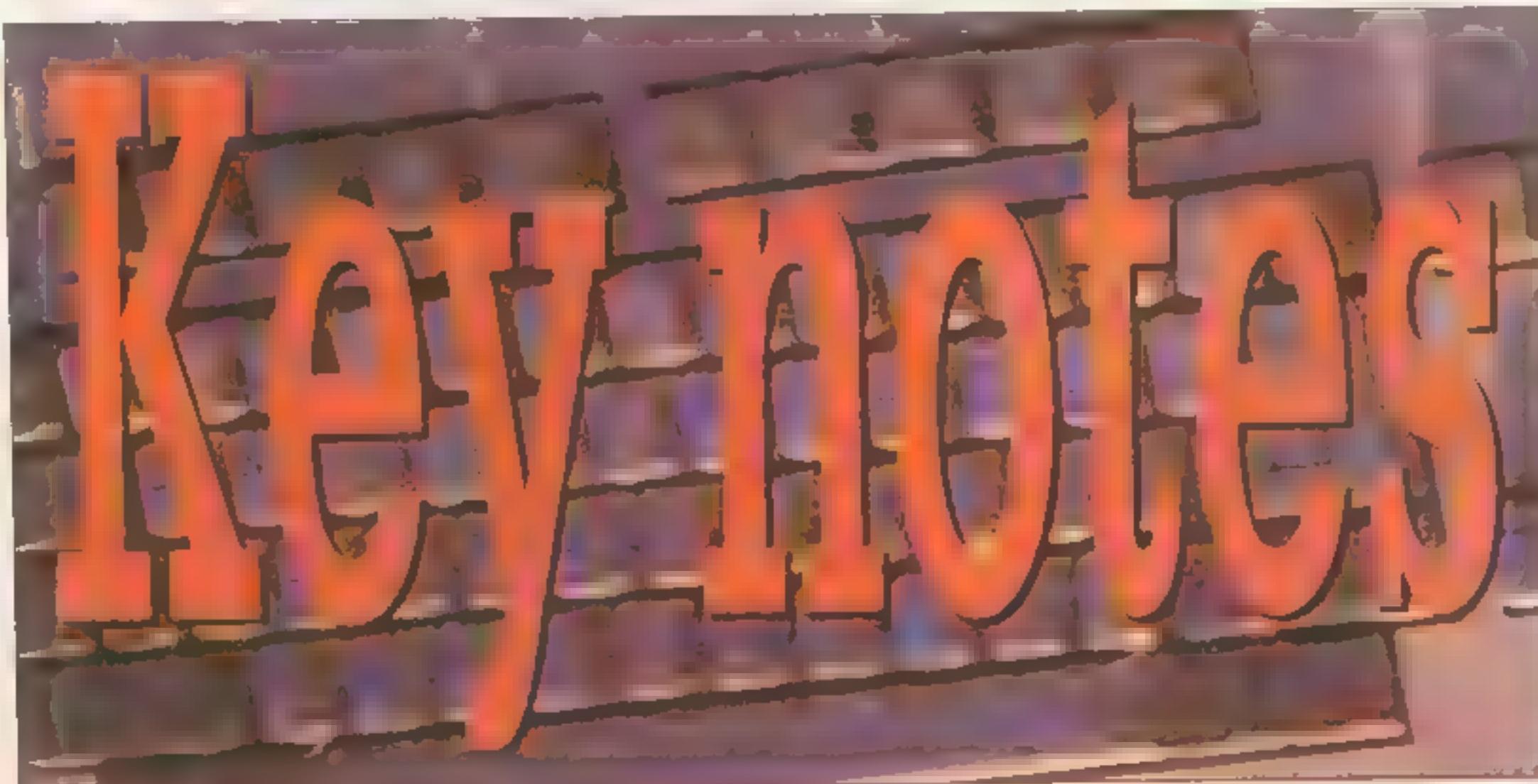
MISCELLANEOUS

Buffer boxes, Printer stands, Converters, Modems, Cleaning kits etc. Call for prices

PRICES ARE CASH WITH ORDER and Exclude Delivery and VAT
All Goods Covered by Manufacturers Warranty



01 739 5607
1-4 Christina Street, London, EC2A 4PA



With all the talk of graphics processors, sound chips, MIDI etc, there's one crucially important part of the computer system that is always overlooked. Peter Worlock puts his finger on it...

On most machines it is in constant use, and without it most computers would be completely useless. What is it? The keyboard.

One reason why this humble but essential item gets neglected is that few computers offer you any options (the PC is one, Apple's Macintosh another). When you buy your computer you're normally stuck with the keyboard the manufacturer gives you.

But another reason is that, more than anything else in computing, keyboards are a matter of personal preference. One person's "firm" is another's "unresponsive", and what you find easy to use, I find appallingly sloppy.

However, regardless of whether they like their keyboard or are simply putting up with it, most people will spend more time communicating with their computers via the keyboard than with alternative input devices like mice and joysticks. And that leads to problems since few people are familiar with keyboards and typing.

Mice and joysticks go part of the way, but until we can literally dictate to our machines, the keyboard is going to remain the primary means of using and controlling the computer.

A guided tour

Although keyboards vary enormously from computer to computer, all of them have certain features in common.

Of foremost importance are the 'alphanumeric' keys (because they carry the letters of the alphabet and the numbers 0 to 9). These occupy most of the keyboard and are often picked out in a contrasting colour to the other keys.

On every standard keyboard (there are some special exceptions such as the Dvorak) these keys are laid out in standard typewriter fashion.

In addition, at the ends of these rows are other less-common characters, usually part of the extended punctuation set - brackets, the [and] characters and the backslash (\). On most keyboards you'll find a similar-looking character, the \ which is sometimes known as an "oblique".

Every alphanumeric key has two characters, and the extra set is accessed by the 'shift' keys - hold down a shift key and press one of the alphabet keys and you get the capital (or upper case) letter associated with that key.

Pressing shift in conjunction with the number keys gives you some of the common punctuation characters like the exclamation mark, brackets, % and & characters. Two characters lead a particularly nomadic lifestyle - the double-quote ("') and the at-symbol (@).

Next come the common function keys. One of these will be familiar to typists and that is the Tab

key, sometimes marked by a right-facing arrow. At the right of the alphanumeric keys is what is usually the biggest key on the keyboard after the spacebar: the Return or Enter key. It may be called either, or it may have a bent left-facing arrow, or some combination of these.

The "Return" label is a carry-over from typewriter keyboards because the key partially duplicates the function of the carriage return on a typewriter. The "Enter" label derives from the fact that in programming, or when some software, only when this key is pressed is the command or information actually entered into the computer.

One key normally found in a prominent position is that marked Esc. It's short for Escape, and when most beginners expect this key to get them out of all sorts of trouble. Unfortunately, the Esc key rarely does anything. In some programs it may live up to its name - by letting you retreat from some function, or exit from a subsidiary screen - but don't count on it.

Next come two keys that remove characters instead of creating them. The first is usually marked Del which stands for Delete, and the second is called Backspace and is usually marked with a straight left-facing arrow. The difference is simple: Backspace removes characters behind (to the left of) the cursor, while Del deletes characters in front (to the right) of the cursor.

Now the shift keys are not the only keys that alter the effect of keypresses. All keyboards feature a "control" key, usually marked CTRL. Like shift, Ctrl is used in conjunction with other keys, but often to produce special computing characters - for example Ctrl-G, which is the BELL character and produces a beeping sound. Ctrl combinations are widely used in software to control special program functions (the WordStar control codes are probably the best-known of these).

Recent years have seen computers sprout additional controlling keys, regardless of whether they are actually needed or not. You'll often find an Alt key which is an ALTernative shift, and on the Amiga there are Commodore and Amiga keys as well as two Alts and a Ctrl. This is simple insanity: the Commodore key does nothing except as part of the Ctrl-Commodore-Amiga reset combination and I've yet to find a software package that uses the Ctrl or Alt keys (most programs use the Amiga key exclusively).

Even a restrained sort of keyboard like the standard PC model shows overkill in key functions. For every alphanumeric key you can have unshifted, shifted, Ctrl-key, Alt-key, shift-Ctrl-key and shift-Alt-key combinations - nearly 300 functions from the alphanumeric keys alone.

On the sensible assumption that ordinary mortals can't hope to remember that sort of stuff, computer designers began incorporating a special

set "function keys". Amiga and ST owners get ten of these, and PC owners may get ten or 12 depending on the model.

On older PC keyboards these keys are ranged vertically down the extreme left-hand edge, but on just about every other computer they're spread horizontally across the top of the keyboard. Either way, unfortunately, it's a losing proposition.

The problem is that the most intensive users of keyboards are people doing word processing, and most people who do word processing already know their way around the alphanumerics. The last thing they want is to start moving their hands into unfamiliar places because when they come back they start hitting the wrong keys. So software houses don't really use the function keys - they'd rather make you type Ctrl-K-D when you want to save a document.

The next most obvious collection of keys on the more up-market keyboards is the numeric keypad on the right. This originated on business computers and was designed for spreadsheet, accounting and other financial applications, and usually duplicates the layout on adding machines and calculators.

On some keyboards the numeric keypad also incorporates the cursor control keys. You switch between the number and cursor functions via the Num Lock key. (AT-standard keyboards, as well as other more generous models like the ST and Amiga, provide you with dedicated cursor keys in addition to the numeric keypad.)

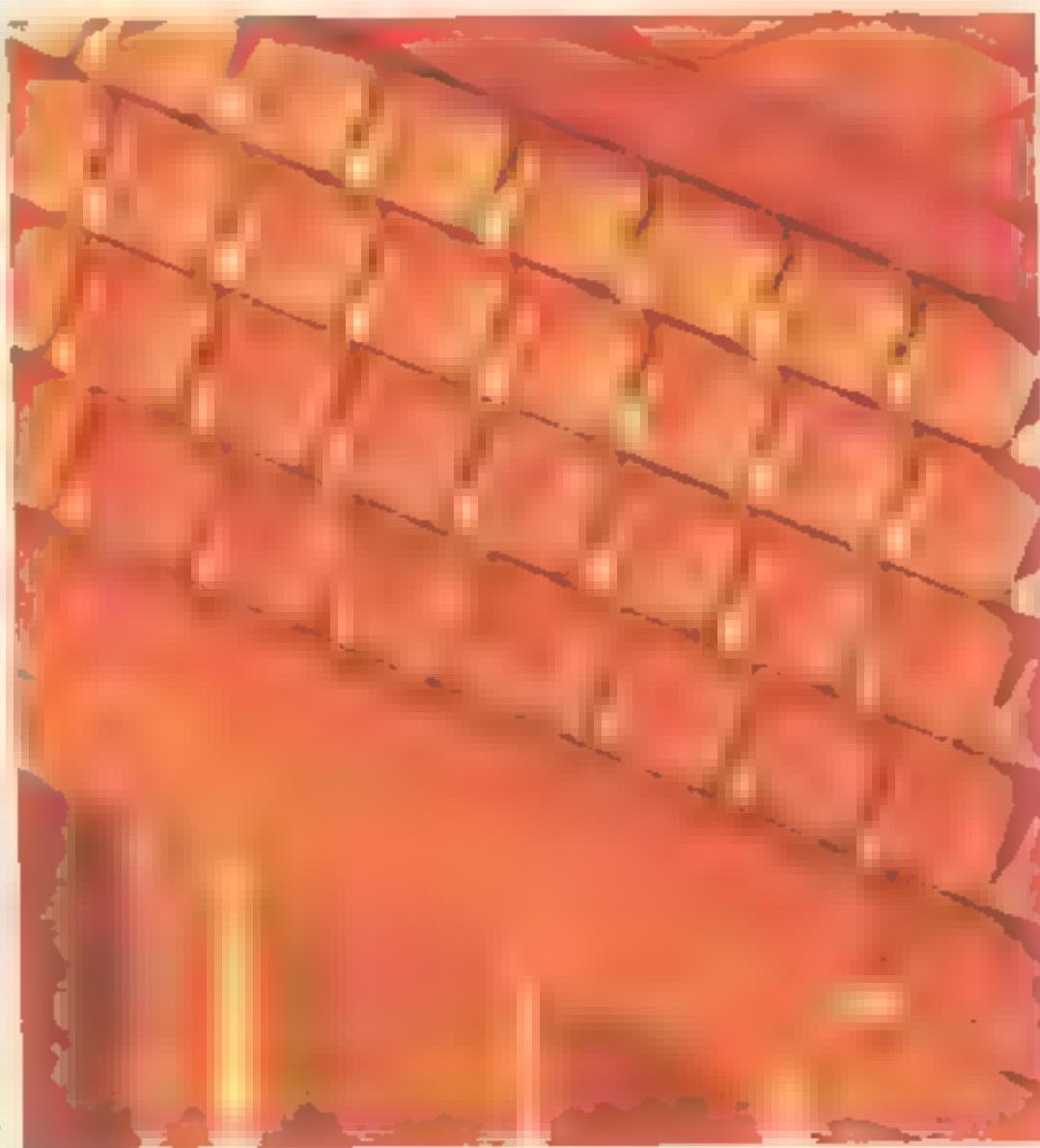
Num Lock is one of an unusual group of keys that differs from all the others. These keys are hard-wired and perform fixed functions (most other keys are software controlled so it is possible to assign any character or function to any key). These hard keys are most commonly found on PC keyboards and include Scroll Lock (which prevents the screen from scrolling when printing passes the last line), and a Reset key which acts in identical fashion to the normal PC reset combination of Ctrl-Alt-Del.

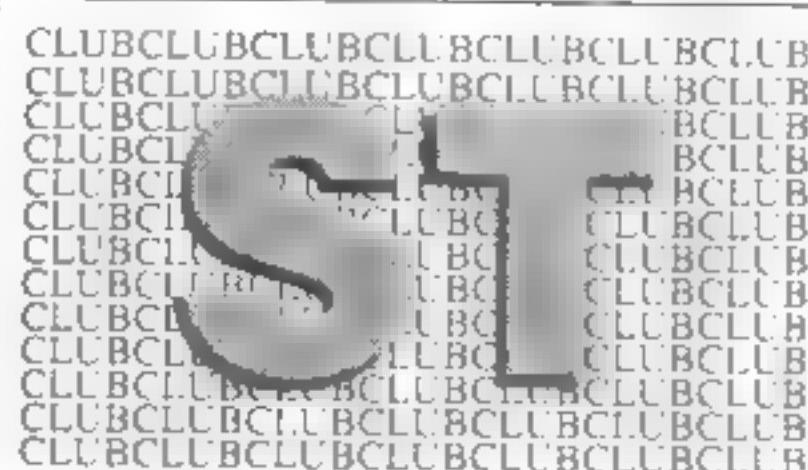
Finally, different keyboards offer a variety of specialist keys. Perhaps the most notable is the Amstrad PCW's. Designed for word processing, these keyboards they have a large number of keys that perform special WP functions - one reason why LocoScript (the 'standard' PCW package) can be amongst the easiest to learn. The PCW is also virtually the only machine boasting software that makes consistent use of these specialised keys.

The key to the future?

So, the computer keyboard is a complicated critter - traditional keyboards were just for typists or teletype operators, but computers have to cater for spreadsheet users, programmers, and computer-aided designers, and all the other users of specialist software. And all of these people make different use of different sets of keys.

There is probably no way out of the problem until the voice-recognition problem is solved. But that's another story ...



**Fright Night?**

Confused? I know I am! Doubtless you've heard plenty about Microdeal's computer version of *Fright Night*. You're probably aware that it isn't coming out on the ST as programmer Steve Bak wants to head a development team rather than pump out code himself.

Well, you'll be surprised to hear that *Fright Night* is coming out on the ST. However, it won't be like the arcade game recently released for the Amiga; instead it will be *Fright Night*, the adventure game. Amiga owners will really be in for a hard time as *Fright Night* will be available in both arcade and adventure format. Microdeal on 0726 68020 should be able to tell you more than the £19.95 price.

Fantastic fonts

The ST Club in 9 Sutton Place, 49 Stoney Street, Nottingham, NG1 1LX (0602 410241) has finished work on the Fontkit Plus Accessory Pack. The Accessory Pack lets you grab characters or images on screen and convert them to GEM font format. There's also provision for converting S.ignam fonts to GEM fonts. The utilities to create GEM fonts and images from other formats will be of particular use to those who need professional results without the hassle of creating fonts from scratch.

The Accessory Pack is available from the ST Club for £4.95 (£3.95 to registered Fontkit Plus users).

Also from the ST Club is the Fontpac Series - a set of fonts on disk. These range from the austere to the ornate. The first two disks contain downloadable fonts for the Star XL10 and LC10 9 pin printers. Fonts include Elegant Macintosh, Backs New, Fancy, Calligraf, Gary Gothic, Orator, Slab Serif, Polish and many more. Other disks in the range contain fonts for the Brother and similar popular printers. Each disk costs £2.70.

Incidentally, the Mac emulator - Spectre 128 - being distributed in this country by HiSoft can't read and write Mac disks directly as suggested a few weeks back. Instead a hardware widget must be attached to the ST that allows the drive controller to perform to Mac standards (that is, spin at variable rates - faster on the outside and slower towards the centre). Details on how the interface work, or where it plugs in, are sketchy. However, it is known that the device is ready and the software is being written. HiSoft hopes to be distributing the gadget by June.

Back to FA-ST. It costs £873 including VAT. Information from Third Coast Technologies, Unit 8, Bradley Hall Trading Estate, Standish, Wigan, WN6 0XQ (0257 426464).

Adrian McHeriot

Game cheats

Speedball: Keep pressing the F1 pause key just after the ball has been released; this makes it easier for you to reach the ball first. Also try to use the holes on the side of the pitch to pass upfield. When your keeper comes into view, and the opposition have the ball, concentrate on using the keeper to stop the ball instead of trying to tackle with the other player: your opponent will usually throw the ball before you reach him and sliding tackles cause the keeper to dive the wrong way. Off-the-ball barging helps reduce your opponent's stamina. Only use the tokens to buy extra goals, more stamina and skill.

Elite: Not really a cheat this one, more an interesting discovery. Press one of the arrow keys when the ship starts rotating on the introduction screen. This stops movement. Pressing the arrow keys forces the craft to move in the direction of the arrow. Also, 'I' zooms in, 'O' zooms out, 'A' toggles between X and Y axis movement, 'T' restarts rotation, 'F' forces the next ship to appear.

DATASUPPLIES

(STATIONERY) LIMITED

100% GUARANTEED 3M / VERBATIM / FUJI 100% GUARANTEED

DESCRIPTION	1-4 BOXES	5-9 BOXES	10 BOXES
3 1/2 DS DD	£15.70	£13.40	£12.50
3 1/2 DS High Density	£40.00	£34.30	£32.00
5 1/4 SS DD 48 tpi	£6.30	£5.60	£5.40
5 1/4 DS DD 48 tpi	£6.60	£5.87	£5.80
5 1/4 DS DD 96 tpi	£12.30	£10.93	£10.58
5 1/4 1.6 MB IBM AT Comp	£10.80	£9.60	£9.29

DELIVERY INCLUDED • VAT EXTRA • PRICES SHOWN ARE PER BOX

BULK DISKETTES ALSO AVAILABLE**WOODFREE LISTING PAPER**

DESCRIPTION	BOXED IN	1-4 BOXES	5-9 BOXES	10 BOXES
11 x 9 1/2 PT Plain Micro 60 gsm	2000	£12.00	£10.00	£9.80
11 x 9 1/2 PT Plain Micro 80 gsm	2000	£18.00	£16.00	£15.00
11 x 9 1/2 PT NCR Plain Perf	1000	£18.50	£16.00	£15.00
11 x 9 1/4 PT Plain Micro 70 gsm	2000	£18.10	£15.68	£14.70
11 x 9 1/4 PT Plain Micro 80 gsm	2000	£18.74	£16.24	£15.22
11 x 9 1/4 PT Plain Micro 90 gsm	1000	£11.25	£9.75	£9.14
11 x 14 1/2 1 PT Green Recycled 60 gsm	2000	£15.38	£13.34	£11.98

MANY MORE SIZES AVAILABLE - RING FOR DETAILS - VAT IS EXTRA TO ABOVE

3M DATA CARTRIDGES

DESCRIPTION	1-4	5-19	20's	R.R.P.
DC 100A	£17.44	£10.63	£10.00	£18.30
DC 200	£11.73	£10.95	£10.26	£18.79
DC 2000	£14.21	£13.27	£12.44	£24.07
DC 300A	£14.58	£13.61	£12.76	£24.58
DC 300XL PLUS*	£15.38	£14.36	£13.45	£26.07
DC 600A	£16.61	£15.69	£14.71	£26.47
DC 600XTD	£19.24	£17.96	£16.84	£32.61
DC 650XTD	£16.07	£15.00	£14.06	£25.98
DC 600HC	£21.00	£19.51	£18.39	£35.40
DC 650HC	£16.07	£15.00	£14.06	£25.90

PRINTED COMPUTER FORMS ARE OUR SPECIALITY!

EXSTOCK SUPPLIES AVAILABLE FOR: SAGE, PEGASUS, MULTISOFT ETC. BESPOKE SERVICE FOR INVOICES, LETTERHEADS, CHEQUES ETC.

We also supply Anti-static Products • Daisywheels • Disk Boxes • Labels • Printers • Printout Binders • Ribbons • Software
Carriage included on all orders of £10 or more

STARGATE INDUSTRIAL ESTATE, RYTON, TYNE & WEAR, NE40 3EQ
SUPPLIERS OF CONTINUOUS STATIONERY, MAGNETIC MEDIA AND COMPUTER ACCESSORIES
TELEPHONE: TYNESIDE (091) 413 5936
FAX: (091) 4134173

COMPUTER STATIONERY (U.K.)

Commercial House, Commercial Road,
South Shields, Tyne & Wear, NE33 1RW
Telephone: (091) 455 4300 Telex: 537390 Fax: (091) 455 1847

**PROBABLY THE BEST PRICES IN THE U.K.!
- ALL INCLUDE V.A.T. AND DELIVERY**

DISKETTES

Nashua 5 1/4" DS/DD 48 TPI	£0.42 each
Nashua 3 1/2" DS/DD 135TPI	£1.07 each
Amsoll 3" CF2	£1.99 each

RIBBONS

Citizen 120D	£2.29
Epson MX100/FX 100	£2.52
Commodore NPS 501	£2.38
Oki Microline 192/193	£3.32
STAR LC24-10 (Original)	£5.68
Amstrad DMP 2000/3000	£2.50
Amstrad 8256/8512	£3.25
STAR LC10 Nylon	£2.89

(All other makes at up to 50% off R.R.P.)

DISK STORAGE

5 1/4" 10 Capacity	£1.20
5 1/4" 50 Capacity	£4.50
3 1/2" 40 Capacity	£4.50

... STOP PRESS !!

Laser Cartridges Canon MK1/MKII £57.90 (Inclusive)

These are just samples of our fantastic offers. Please send £1.00 for our full product listing (refundable), or ring for a price.

Cheques/Postal Orders/Official Orders to:

Computer Stationery U.K.
Commercial House,
Commercial Road,
South Shields,
Tyne & Wear,
NE33 1RW

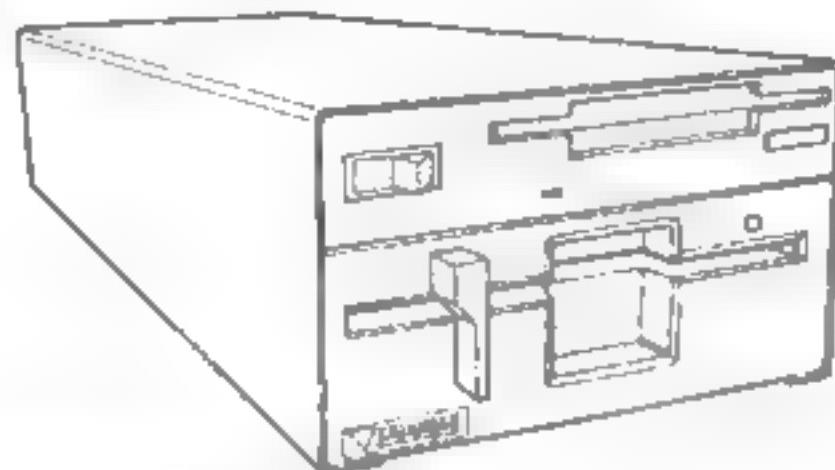


(All Orders under £10.00 - Please add £1.00 Postage & Packing)

AMAZING PRODUCTS

Incredible Prices

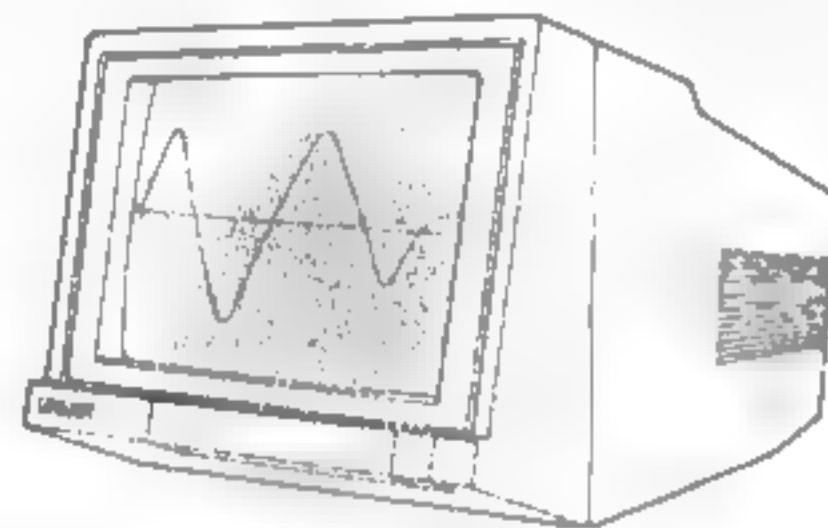
DISK DRIVES



COMMODORE AMIGA

3.5" External NEC Drive	£86.50
5.25" External IBM™ Compatible	£99.95
5.25" External with PSU	£115.95
3.5" / 5.25" "MultiDrive" (pictured)	£199.95
A2000 3.5" Internal Kit	£69.95

ATARI ST (PC-Disk only £49 when purchased with any drive) - RRP. £79.95	
3.5" 720K External NEC Drive	£90.00
5.25" External IBM™ Compatible	£115.95
3.5" / 5.25" "MultiDrive" (pictured)	£199.95
STFM NEC 3.5" 720K Internal Upgrade	£69.95

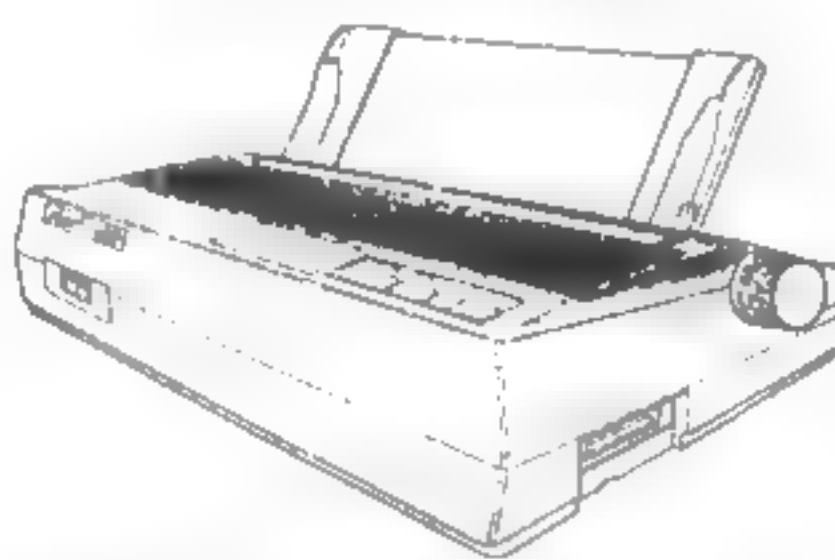


All monitors provided with free lead. Please state computer.

Philips CM8833 Med. Res. Colour	£225.00
Philips CM8852 High Res. Colour	£299.00
NEC Multisync II Colour	£499.00
NEC Multisync II GS Grayscale Colour	£199.00
Atari ST124 High Res. Mono	£99.95

MONITORS

PRINTERS



All printers standard Centronics Parallel. Cable not included.

Star LC-10 Mono 9-pin Dot-Matrix	£189.95
Star LC-10 Colour 9-pin Dot-Matrix (pictured)	£249.95
NEC Pinwriter P2200 Mono 24-pin Dot Matrix	£299.95
Centronics Parallel Cable	£12.00

WE SUPPLY AMSTRAD PC, ATARI ST AND COMMODORE AMIGA COMPUTERS AND PERIPHERALS AT BEST PRICES! PLEASE CALL!

IBM PC 20MB HARD CARD - £199!

PC DISK DRIVES

Internal 3.5" NEC 720K Drive Kit	£89.95
External 3.5" NEC 720K Drive	£149.95
Internal 3.5" NEC 1.4Mb Drive Kit	£99.95

PC MISCELLANEOUS

Serial M2 Mouse	£39.95
Game Card	£24.95
Joystick For Above	£39.95

HARD CARD SPECIAL!

HARD CARDS FOR IBM XT & PC

Miniscribe 20Mb Hard Card	£199.00
Miniscribe 30Mb Hard Card	£229.00

HARD CARDS FOR IBM AT

Miniscribe 30Mb 65mS	£279.00
Miniscribe 30Mb 40mS	£299.00

All hard cards still suitable for compatibles, such as Amstrad PC1512/1640. XT Hard Cards also suitable for Amiga 2000 with XT Bridgeboard.

All items on this ad. may be ordered by postal mail order or by telephone.

We accept Access and Visa.

Please make cheques and POs payable to Power Computing.

POWER COMPUTING

44a Stanley Street, Bedford, MK41 7RW

0234 273000

(5 lines)

Prices include VAT and delivery. Please add £10.35 for overnight courier delivery if required.

We reserve the right to change prices and product lines without prior notice.

MACHINE-SPECIFIC COLUMNS

PC

New games

Having worked my way through BBC Micro and Amstrad CPC I haven't made much mention of games in this column as the PC hasn't really had the capacity for decent graphics or sound. Magenta skin tones and white landscapes are pretty unconvincing and the occasional beep from a PC's speaker doesn't create much of an atmosphere. There are signs that things are changing though.

The default graphics standard is climbing week by week with more machines being bought as standard with EGA graphics and many now sporting VGA. With EGA it's possible to get quite reasonable graphics onto the screen and with VGA a good few games machines can be put to shame. Battle Chess is now available on the PC and really looks the part with smooth animation and some lovely digitised sound samples. Very playable and proof that the PC can make good sound as long as you have room on the disk for the samples. Logitech's Star Goose is also out on the PC and I'm told looks equally good though I haven't seen a copy yet.

While on about sound the PC's main failing I can't understand why some enterprising hardware supplier hasn't tried to set a standard with a sound chip expansion card. You would have thought a reasonably priced card could have been put together with at least the chips used in CPC, ST et al. With the right marketing to home users of PCs and some support from software houses it could be a nice little earner for the hardware company an added selling point for games suppliers and a bonus for the PC user who'd have a more authentic game. This after all is how Kempston made its name on the Spectrum scene only with a joystick standard rather

than sound. There's a bigger potential market than with any machine bar the Speccy.

MS-DOS

Here's another other story about a laptop. Once I'd connected the 5.25" external drive to the Zenith, I thought I'd try running my favourite non-zapping game of all time, Tetris. The program started OK, but then searched through all the drives looking for its key disk. Silly thing didn't seem to consider the external C drive as a legit source and refused to run.

If you know something of the darker secrets of DOS, you'll know there should be a simple solution to this. The SUBST command lets you substitute one drive for another drive, or a directory on a drive. The command A:SUBST A: C: from the C: drive for instance, makes C: into A: and throws A: out of the window, as far as DOS is concerned. With this trick in place, Tetris should look on the external drive for its key disk. Unfortunately Tetris pays no heed to DOS and still claims there's no keydisk in drive A: or B:. This must be pretty frustrating for anyone with only an external 5.25" drive. Marv is off.



You can of course use SUBST to less subversive ends, like creating 'pretend' logical drives on a hard disk. I have a SUBST command in the AUTOEXEC file of my hard disk to turn C: GEM into drive G:. Thus I can treat all GEM directories as if they are on a separate drive from the rest of the contents of C:

Laptop confession

OK, I've gone and done it. Having failed to get hold of a Comcen laptop (see PC Update 17) as they had none in stock, I went down to Plymouth to see a Zenith supersPORT (their capitals). And what a nice machine - twin floppies, 2.5hr battery pack, DOS 3.3 Plus, serial and parallel ports, and sockets for extension floppy (hooray) and monitor. It also has 640K as standard and spaces for an extra megabyte, a maths co-processor and an internal modem. Top Deck, the Plymouth dealer (0752 791800), also throws in a pukka all-zip-and-velcro carrying case and a copy of the Lap-Link communications pack. All for £1,058, which may seem a lot - but for one thing. The ZFE184-1 has quite definitely the best LCD screen of any portable.

There are plenty of high-end 20Mb hard disk jobs with excellent gas plasma displays, assuming you like shades of pink, and there are rumoured to be colour LCDs just around the corner (guess how much they'll be?). For the moment, though, the back-lit Zenith display, which shows blue text on a silver-grey background gets my vote for the most readable screen on a laptop.

The Zenith also got my money. Rather more of it than I wanted to spend. Nevertheless, I've since got my extension floppy working with it, but that's another story.

Drawing conclusions

The advent of VGA has brought all kinds of interest from companies producing graphics packages. Two of the latest are Corel Draw and Adobe Illustrator. Corel Draw majors on type effects and colour output. It claims over 50 fonts with numerous pattern fills and effects and the ability to produce colour separations with full Pantone and CYMK support.

Adobe Illustrator is a rework from the Mac version, which has become something of a standard for drawing and illustration work on that machine. The PC program works under Windows, as does Corel Draw, so no doubt both suppliers have eyes on OS/2 and Presentation Manager versions. Illustrator is aimed at users who want PostScript output from their PCs, and includes Collector's Edition, a set of clip art symbols, borders and letterforms.

Both packages offer DXF conversion, which allows them to import AutoCAD drawings, and Autotrace, which will take a bit-mapped image and convert it into an object-oriented graphic. Neither package is cheap, with Corel Draw coming in at £350 and Adobe Illustrator costing a bouncy £595, both with added VAT.

Simon Williams

AMIGA BLIT

IFF: The Only Way is Up!

The IFF file standard is truly a wonderful thing and must surely be one of the Amiga's greatest assets. After all what other machine can boast the kind of data-portability that the Amiga offers. If you draw a picture, compose a piece of music, generate an animation even, chances are that it'll load into another similar program with little or no modification whatsoever. Try doing that on a PC or an ST.

A lot has been happening on the IFF development front over the past couple of months and it seems that Commodore may at last be listening to the suggestions of the average Joe Public.

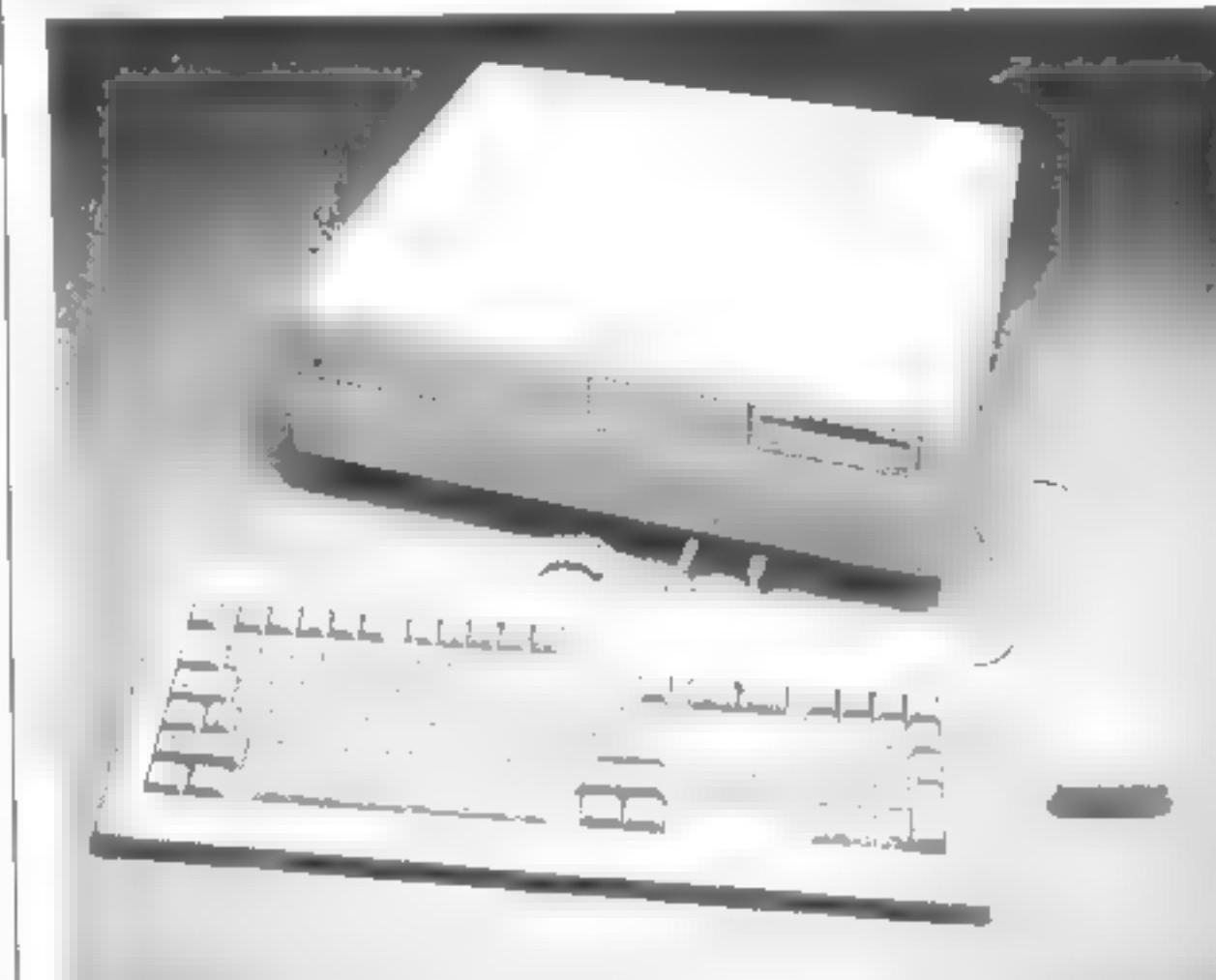
Probably the major news, sure to be greeted with considerable interest by many Amiga users, is the announcement that Commodore Amiga are soon to release a standard IFF library. The library will be disk-based and will be accessed in the same way as cartridge, disk-based libraries such as diskfont, library and icon library etc., using the Exec function OpenLibrary() to gain access to the library routines.

The Library will provide programmers with a standard set of core routines for handling IFF data chunks of all types. This will not only be great news for programmers as it makes IFF support easier to incorporate into programs but it should also make IFF even more portable than it already is. Form specific libraries for handling particular IFF types should follow soon after from Commodore Amiga.

Other announcements include the addition of several major new IFF forms. Commodore US has been working closely with third party developers trying to make all data, regardless of its type, conform to an Amiga industry standard. Consequently data types soon to fall under IFF control include MIDI data, MIDI-compatible samples and others.

Unix + Amiga: The killer combination

Commodore's much publicised Unix-based Amiga, the A2500UX looks set to become an instant hit when it is eventually released later this year.



According to Rob Waste of Spire Communications, Commodore's PR company, Commodore has been steadily increasing industry awareness of the new Amiga by publishing advertisements in vertical market publications and sending out press releases to specialists sectors of the high-tech

INDUSTRY

The 2500UX has previously been seen only once in this country at last month's Wicht show, but early signs suggest that the machine has been greeted with considerable enthusiasm from all sectors of industry. Even big names such as Plessey and GEC have made inquiries about the machine. At this interest has left Commodore's sales staff kicking themselves as they have a huge number of potential customers but nothing to sell them.

Ron, sitting down his usual strange blend of English and other insect dialects described the term as Hammaras. Ron assures me this is an old Australian term meaning *assassin*.

Message Port

If you have any views on any issues raised within AmigaBLIT, or even the Amiga scene in general, then I'd like to hear from you. Similarly, if you have any tricks, tips, cheats or tactics for the latest Amiga games then why not share them with your fellow Amiga owners; not only will you be helping other Amiga owners, but you'll also be famous!

Send your tantalising tips, bodies of info and bribes to: AmigaBLIT, New Computer Express, 4 Queen Street, Bath BA1 1EJ

Stop Press!

I can always find space for a damned good news snippet in AmigaBLIT and this week's column is no exception. News has just reached my ears that Commodore are soon to release a new ROM Kernel manual, published as always by Addison Wesley called ROM Kernel Manual, Includes and Autodes. It doesn't take a genius the size of two planets to work out from the title what the new manual contains. Look out for it in your local Amiga computer shop real soonish.

At Last! A Working Sword of Sodan Tip!

Oops! It seems that the last so-called mega tip for Discovers' Sword of Sodan didn't technically describe precisely what it was supposed to do, which translated means that it didn't actually work at all. All I can do is issue the usual "try again" quibbles, all round unfortunate at the time I didn't actually have the quipper so I couldn't test the tip.

Moving on quite nicely, and why not? I present my latest piece offering, a 100-working guarantee for five years with parts and labour, plus the win in just proof tip for

Sword of Sodan
Why am I so confident that this tip will work? well I have gone to great lengths to test it personally myself.
So fancy infinite lives, why do I get this feeling of déjà vu? All you have to do is to play a game as normal, but make sure you loose all your lives on the first screen which I didn't find overly taxing!
When you are

asked whether you would like to see a replay select Yes and then wait. Once you've done that and the action replay starts press Q straight away start another game and you will have infinite lives.

Jason Holborn

Pageplay



Amiga Consultancy

If you or your company are using or thinking about using Amiga computers in professional applications we can help.

We are computer consultants who will advise you on, supply you with, train you in and maintain complete systems based around the Amiga.

We deal in desktop publishing and design, desktop video and animation, database management and presentation and allied business uses. In fact whatever your business problem there is a good chance that we can find a healthy solution.

For further information call us at the number below.

01 284 0903

HI TECH SUPPLIES

0481 714183

DISCS & RIBBONS

5.25" DS DD 96tpi

25	50	100	250	500	1000
£7.50	£14.50	£28.00	£65.00	£115.00	£220.00

3.5" DS 135tpi

25	50	100	250	500	1000
£21.50	£42.50	£83.00	£150.00	£400.00	£790.00

5.25" DS DD 96tpi

WITH ENVELOPES PRINTED WITH YOUR LOGO etc.

500	1000	2500	5000
23p	22.5p	21p	20p

RIBBONS

TOO MANY TO LIST, FOR EXAMPLE

AMSTRAD 8256	£3.95
BROTHER HR 15, 25, 35	£3.10
EPSON LX 800	£2.65

HI TECH SUPPLIES

3 ST JAMES STREET

ST PETER PORT

GUERNSEY

CHANNEL ISLANDS



All prices include VAT & Postage

SPEX

Rock Star Ate My Wallet

After getting off to a shaky, not to say rubbish, start it is good to see the Code Masters Plus range come up with a decent product. Remember, this was a new label offering more



complex and involving gameplay than budget title - oh, and 7 more gold coins per sale in the Darling brothers' industrially reinforced pockets.

Rock Star Ate My Hamster it's called, and amazingly enough for a Code Masters release, you won't find any trace of Ninjas, BMXs, Simulators or that Drizz character. What you will find, however, is some sincere, honest and unbiased quotes on the cover, along the lines of "Completely brill and wicked. Buy four copies today" - Richard Darling

Surprisingly, though, RSAMH plays really well as a pop group management simulator and is a computer game that deliberately tries to be funny, almost. When compared to some of the Fergus McNeill adventures and the so-bad-it-was-good East Enders, it's not hilarious, but I'll admit to a few out-loud chuckles when no-one was looking. After all the gratuitous violence, commie bashing and strip poker filling up the market, it's good to see a computer game bring a little laughter into this weary old world.

Having said that, anyone who insults the legendary name of rock idol Cliff Richard by calling him Stiff Richard should watch out. We Cliffettes don't take kindly to it, I'll tell you.

A real tip

Here's another valuable piece of ammo in the endless war between human and computer. Putting it slightly less dramatically, type TREASURE in Activision's newie, The Real Ghostbusters to skip the current level.

Huge thanks go to Richard Garrood at Aldershot for that one. (More from him later.)

Any other tips, pokes and cheats for Spectrum software (serious stuff included) needing a good home should be scribbled on the first thing that comes to hand and rushed to: Robin Alway, SPEX, New Computer Express, 4 Queen Street, Bath, BA1 1EJ.

Boot on the other foot

If you can survive the smoke and mentally deranged psychos playing Operation Wolf, make sure you visit your local amusement arcade sometime soon. That great Spectrum coder Jon Ritman (author of Match Day, Batman, Head Over Heels etc) is back, and his latest project has been written for something just a tad more powerful than the Speccy.

Rare (Ultimate as was) is set to unleash a coin-op footy game written by Mr Ritman. I can't wait to see what relation it bears to his Speccy stuff.

In fact, it might well be worth dusting off your copy of Match Day, just to get in a bit of practice. These arcades aren't cheap places, you know.

Cruel rumours

If I hadn't been at my most understanding this week, one letter from a certain Richard Garrood would have been straight in the cylinder-shaped filing cabinet labelled Bin Craftily tucked away inside the envelope was a classified ad trying to sell a -2. The cheeky chappy actually said in his letter "Please pass the ad on - I'm so busy saving up for an ST that I can only afford one stamp". You can't blaspheme like that in front of a Spectrum wordshipper! Generous as ever, though, I've decided to let the writer of said letter off. Firstly, because he said the April 1st Computer Excess pull out - "was brilliant" I haven't laughed so much since I bought PCW once! (What can he be referring to?) Secondly, like me, he was pretty damn curious about a news item printed in Spectrum-specific mag Crash concerning a plethora of Speccy add-ons from Amstrad.

The Snubware Show

The latest attempt at producing a television programme for home computer users has been, gone and managed to brass me off in the process.

The Software Show wasn't all that bad. BBC TV's Mr Computer, the one and only Fred Harris, didn't show his face - which came as a huge relief. And the topics covered were a bit more relevant than you used to get in Micro Dead.

No, the main problem from my point of view was the absolute absence of Britain's best-selling computer. Yes, your friend and mine, the Spectrum. Littered through the whole thing were a distressing amount of non-Speccys, all of them more expensive and all of them less popular. It's pretty stupid trying to cover computing in the home without featuring the one machine that's in more homes than any other, don't you think? It might not have the words BBC emblazoned on it, but sheer weight of numbers means our rubber friend deserves coverage.

Mind you, the Beeb's sanity always has been in question, I mean showing a program like Going Gold doesn't exactly suggest sound presence of mind in anyone's book.

At first I thought this was particularly unfunny and cruel April Fool's joke. This is an user friendly Amstrad we're talking about. The company which has been responsible for evils like the rewriting of joystick ports -2As and of course the buy-out of our beloved Sir Clive is in the first place.

The item mentioned a host of new products for Spectrum owners, including a word pro package with printer and software, a special interface to banish those -3 tape loader blues and - hip, hip, hooray - a stand-alone 3" disc drive.

All this was rumour, so don't go building your hopes up quite yet. I'd wait for the official news story in Express. At the time of writing nothing has been forthcoming from Amstrad. If it does turn out to be true, it will be an amazing turn around. What's prompted Uncle Al to be so kind? The Spectrum is the best selling home computer in Britain and has been for a long time. Maybe he's finally realised what huge amounts of money were passing him by. On the other hand, maybe some incredibly witty (OK, half-witty) journo is leading us up the garden path.

Richard goes on to recommend the Vidi digitizer from Rombo. "I use it often - it's really easy" he said. This add-on costs a very reasonable £34.95 from Rombo Productions on 0506 39046. If you've got software or hardware recommendation, send it in.

Robin Alway



Run and Chuckie Egg (now on the Amiga). Remember Thing on a Spring?

The man behind quite a lot of these games is Ratt (Tony Crowther), who seems to be trying to keep the originality going with Bombuzal - well worth a look if you haven't seen it already. Another famous name in this field is Peter Harrap, who is also trying to keep things back in line with Terramex, an arcade adventure written for all the formats available and, of course, Pacmania on the Amiga.

Maybe when companies are fed up of the sight of arcade machines we may see some originality (but we doubt it).

Cheats

The first of this week's tips comes again from the master of hacking, Gary Gaud. For infinite lives in Chubby Grisly, type the following poke after resetting the machine:

POKE 3613,173 (return)

SYS 2994

Secondly, from Martin Little in Clevedon comes a cheat for Thunderblade to get you past those mobile fortresses at the end of each stage.

Just before you get to the fortress, before the guns start firing at you, press [RUN/STOP] [SHIFT LOCK] [S] and [F3]. Your helicopter will now reverse into a load of scrambled graphics. Keep your fingers on the keys (so that it keeps reversing) until up comes 'finished stage 1 2 etc'. This takes about 20 seconds.

Ian + Mic

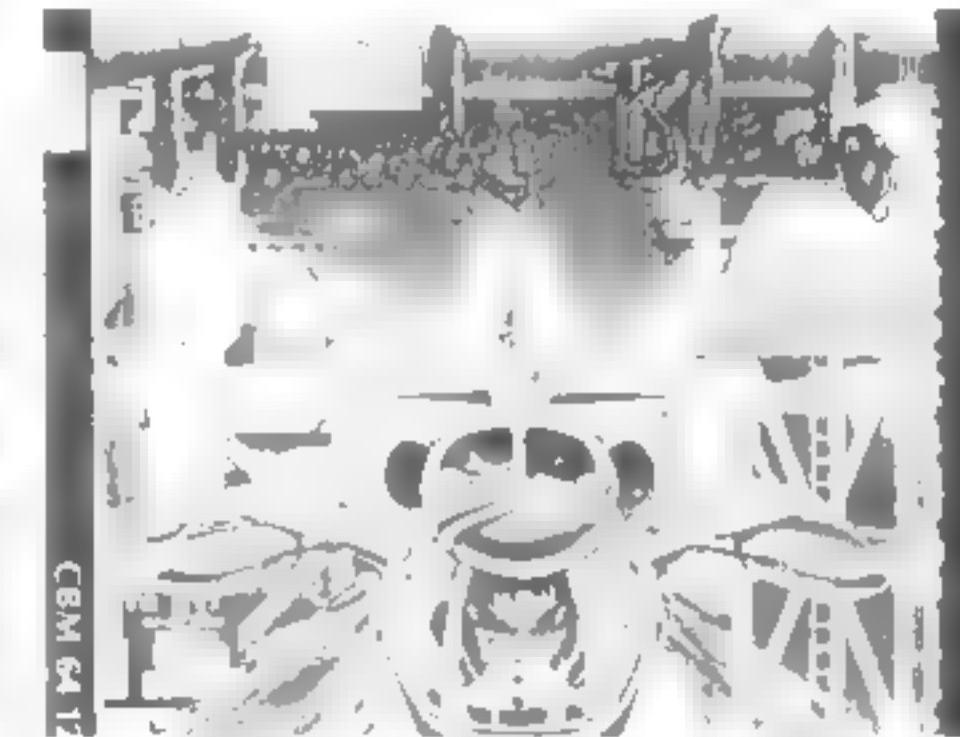


• Terramex, by Peter Harrap: One of the few really original games still available?

on the market and being reviewed etc. but with the move away from original game ideas, these days there are people out there who have written so many conversions they've forgotten which ones they've done!

We just wish there was at least one company out there which would produce an original piece of software, one that didn't bear a resemblance to an arcade game.

Some of the best original releases are platform-type games in which you control a cute or ugly character you can either fall in love with or laugh at. Our all-time favourites include Monty Mole, Monty on the



Scroll listing

```

0 P=50176
1 POKL=0TO214:READA:POKEB+1,A:NEXTL
10 DATA 162,0,189,1,4,157,0,4
20 DATA 189,41,4,157,40,1,189,81
30 DATA 4,157,1,4,189,121,4,157
40 DATA 1,4,189,1,4,157,160
50 DATA 189,1,4,157,1,4,157,189
60 DATA 4,157,240,4,232,224,10,208
70 DATA 209,189,1,189,25,5,157,25
80 DATA 5,189,65,5,157,64,5,189
90 DATA 105,5,157,104,5,189,145,5
100 DATA 157,144,5,189,185,5,157,189
110 DATA 5,189,225,5,157,224,5,232,232
120 DATA 224,40,208,215,162
130 DATA 6,157,8,6,189,1,4,6,157
140 DATA 48,6,149,89,1,4,89,6
150 DATA 189,129,6,189,1,4,6,189
160 DATA 6,157,168,6,189,1,4,6,157
170 DATA 1,189,214,6,157,1,4,6,157
180 DATA 232,224,40,208,215,162
190 DATA 33,7,157,1,7,189,73,7
200 DATA 157,72,7,189,113,7,157,112
210 DATA 7,189,153,7,157,152,7,189
220 DATA 193,7,157,192,7,232,224,40
230 DATA 208,221,96,96,96,120,173,18
240 DATA 208,201,255,208,249,173,22,208
250 DATA 201,192,240,5,206,22,208
260 DATA 96,173,22,208,24,105,7,141
270 DATA 22,208,32,0,196,88,96,0
300 SYS50357

```

Do you love listings? Well, this week's little codesmasher will scroll the entire C64 screen pixel by pixel. Each time you SYS 50357 it will move one pixel to the left. Could come in handy one day. Just type it in as printed - lines 300 onwards are yours to do with as you wish.

How the scrolling works is simple. All the computer does is look at the whole tape line one position over from the start and places it back one. And to make the screen scroll smoothly we just decrement location 53270 8 types then reset it back to the top and move the whole screen over one block - voila! Now you can write your own scrolling Sector 64 style game!

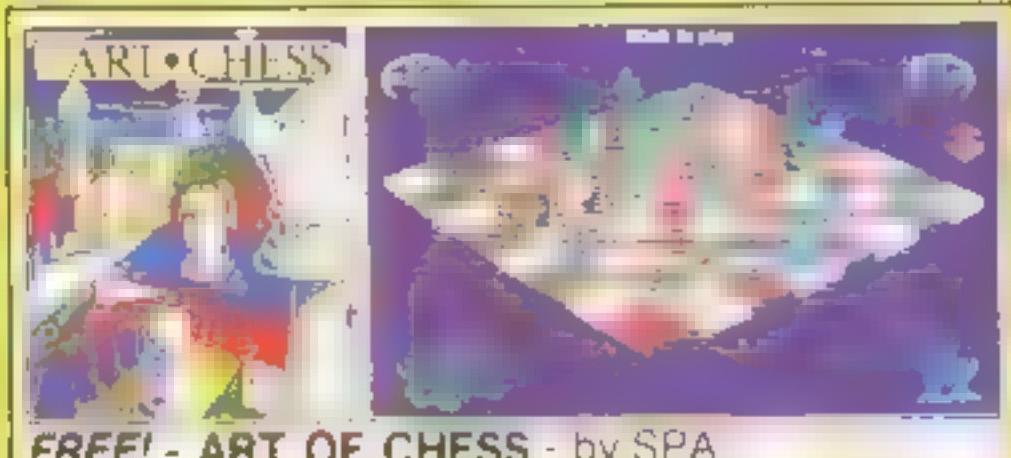
FREE! TENSTAR PACK WORTH OVER £229!



FREE! - AMEGAS - by Players



FREE! - INSANITY FIGHT - by Microdeal



FREE! - ART OF CHESS - by SPA



FREE! - MERCENARY COMP - by Novagen



FREE! - BARBARIAN, ULT WARRIOR - by Palace



FREE! - TERRORPODS - by Psygnosis



FREE! - BUGGY BOY - by Elite



FREE! - THUNDERCATS - by Elite



FREE! - IKARI WARRIORS - by Elite



FREE! - WIZBALL - by Ocean

Commodore AMIGA



£346.95
+ VAT
£399

INCLUDES
FREE UK
DELIVERY

The Amiga 500 is one of a new breed of technologically advanced computers, which are now emerging as the new standard for home computing, based around the new Motorola 68000 chip. The A500 has 512K RAM and a 1Mbyte double sided disk drive built-in. It can be connected directly to a wide range of monitors, or to a domestic TV set through a TV modulator. Designed with the user in mind, the A500 features a user friendly WIMP environment and comes supplied with a free mouse. And, when you buy your Amiga from Silica Shop, the UK's No1 Amiga specialists, you will experience an after sales service that is second to none, including a technical support helpline and free newsletters and price lists. Return the coupon below for our current information pack, which will give details of the Silica service and the very latest Silica Amiga offers.

E&OE

WHY SILICA SHOP?

Before you decide where to buy your new Amiga, or Amiga related hardware, we suggest you consider very carefully what it is you are buying. There are MANY companies who can offer you a computer a few pennies less than the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer as well as expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Amiga related products in the UK and that is Silica Shop. We have the largest range of Amiga related products in the UK and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. Here are just some of the things we can offer you.

THE FULL STOCK RANGE: The largest range of Amiga related peripherals, accessories, books and software in the UK

AFTER SALES SUPPORT: The staff at Silica Shop are dedicated to help you to get the best from your Amiga

FREE NEWSLETTERS: Mailed direct to your home as soon as we print them, featuring offers and latest releases

FREE OVERNIGHT DELIVERY: On all hardware orders shipped to Silica Shop customers within the UK mainland

PRICE MATCH PROMISE: We will normally match our competitors offers on a same product same price basis

FREE TECHNICAL HELPLINE: Full time team of Amiga technical experts to help you with your technical queries

But don't just take our word for it. Complete and return the coupon below for our latest Amiga literature and begin to experience the Silica Shop specialist Amiga service

PHOTON PAINT PACK

A500 Computer	£399.99
TV Modulator	£24.99
Photon Paint	£69.95
TenStar Pack	£229.50

TOTAL RRP:	£724.43
LESS DISCOUNT:	£325.43
PACK PRICE <small>INC VAT</small>	£399

1084S MONITOR PACK

A500 Computer	£399.99
1084S Colour Monitor	£299.99
Photon Paint	£69.95
TenStar Pack	£229.50

TOTAL RRP:	£999.43
LESS DISCOUNT:	£350.43
PACK PRICE <small>INC VAT</small>	£649

FREE FROM SILICA

When you buy the Amiga 500 from Silica Shop, you will not only get a high power value for money computer, we will also give you some spectacular free gifts. First of all, we are now including a TV modulator with every A500 stand alone keyboard, so you can plug your Amiga straight into your TV at home (the modulator is not included with the A500+A1084S pack as it is not required for use with monitors). Secondly, we have added a free copy of Photon Paint, an advanced graphics package with an RRP of £69.95. Last (and by no means least!) so that you can be up and running straight away, we are giving away the sensational TENSTAR GAMES PACK with every A500 purchased at Silica Shop. This pack features ten top Amiga titles which have a combined RRP of nearly £230! Return the coupon for details.

FREE TENSTAR PACK

When you buy your Amiga 500 from Silica Shop, we want to make sure you get the best deal possible. That is why we are giving away the TENSTAR GAMES PACK worth nearly £230, absolutely FREE with every A500 purchased from us. The TenStar Games Pack includes ten titles for the A500, each individually packaged in its own casing with instructions	Amegas	£14.95
	Art Of Chess	£24.95
	Barbarian, Ult Warrior	£19.95
	Buggy Boy	£24.95
	Ikari Warriors	£24.95
	Insanity Fight	£24.95
	Mercenary Comp	£19.95
	Terrorpods	£24.95
	Thundercats	£24.95
	Wizball	£24.95

TOTAL RRP: £229.50 INC VAT

If you already own an Amiga computer and would like to be registered on our mailing list as an Amiga user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist Amiga service that is second to none.

SILICA SHOP:

SIDCUP (& Mail Order) **01-309 1111**
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX
OPEN: MON-SAT 9am - 5.30pm LATE NIGHT: FRIDAY 9am - 7pm

LONDON **01-580 4000**
52 Tottenham Court Road, London, W1P OBA
OPEN: MON-SAT 9.30am - 6.00pm LATE NIGHT: NONE

LONDON **01-629 1234 ext 3914**
Selfridges (1st floor), Oxford Street, London, W1A 1AB
OPEN: MON-SAT 9am - 6.00pm LATE NIGHT: THURSDAY 9am - 8pm

To: Silica Shop Ltd, Dept NCE 0489 The Mews, Hatherley Road, Sidcup, Kent DA14 4DX
PLEASE SEND ME FREE LITERATURE ON THE AMIGA

Mr/Mrs/Ms:

Initials:

Surname:

Address:

Postcode:

Do you already own a computer?
If so, which one do you own?



Nothing that will let you maintain a score through a match (in a similar fashion to the TV scorecard computers) is currently available. Such things would be dead easy to write and given that there are several thousand cricket clubs most of whom must have access to PCWs and a plug in the pavilion, there's a market. So get writing, someone.

Stand up for your whites

April is Britain's rainiest month, so of course it's the start of the cricket season. The PCW is an ideal statistician for any cricket scorer and if you want to automate your club's figures several possibilities exist.

1. Write a simple BASIC program or get one written (ask friends/ check small ads in 8000 Plus) which can maintain your averages/ produce scorecards for a match etc.
2. Do the same with a spreadsheet (Microsoft Professional/ SuperCalc etc are ideal)
3. Buy Stephen Farnham's Averages program for £10 (88 Abingdon Road, Drayton, Abingdon OX14 4HT)

Toys will be toys

April's 8000 Plus magazine included a spoof review of LocoToy, an add-on to LocoScript, which featured on-screen simulations of Newton's Cradle, a mobile, a cheese plant and a snowstorm (which involved turning the PCW upside down). A joke, of course, as was the ad for LocoToy in the same issue (to be sent to 'Isabel Ringing'). Unfortunately many were taken in and Locomotive has had to reply to dozens of requests for LocoToy. Its reply letter (from 'Isabel Ringing Now') is commendably tongue in cheek.

Ridiculous link

Cricket is of course very popular in India, and anyone who's been there will tell you how long everything takes. Time does not exist; the Hindi word for 'tomorrow' is the same as for 'yesterday'. It's all rather like life as a PhD student, many of whom are frantically writing up now, only a few years past deadline.

The PCW is an ideal machine for writing a thesis and it's rather surprising the relative lack of academic software there is for it. A bibliographic database is available though in the form of Paperbase, £49.95, from Wight Scientific (01 858 2699). You make ASCII versions of your thesis files with your references in the standard forms (you can define special forms if you like) and Paperbase automatically compiles lists of the references in a new file, sorted and arranged in various ways for you. Ideal for academics

Saved on the line

It's a bind constantly having to save a BASIC listing as you type it in, run and test. If however, you make the last line something like 10000 SAVE 'FRED' then every time the program runs, it'll also be saved in its current form.

Basil Pigg



QL computerised bulletin board systems

Two Quanta members, Stuart McKnight and Laurence Reeves, have developed a bulletin board software package for the QL called QView. It is Prestel-compatible, so can be accessed with the cheap and cheerful Miracle modem mentioned in the last issue. The package sells for £50, and you get £20 off the Astracom modem supplied by TF Services (01-724 9053) if you set up a CBBS using QView. Stuart and Laurence have set up their own CBBSs - ATAVACHRON on 0480 412884 and LAU on 01-751 6096. They both use the ring-back system - dial the number, let it ring a couple of times, hang up and redial. The systems are on 24 hours a day.

Also using the QView package is Sector Software on 0772 454328 after 6pm and 7773737 (ring-back).

Using OPD Microdrives on the QL

J and N Bull of Brighton is selling twin Microdrive assemblies from the ICL One Per Desk for £5. Leighton Davies of Quanta recently wrote an article for the group's newsletter describing how to modify them for use as external Microdrives with the QL. ICL redesigned them for the OPD, and Leighton reckons he consistently gets far

more good sectors formatted than with his original drives. By the way, the OPD was also sold by British Telecom as the Tonto. I doubt if it sold very many in Spain - 'Tonto' means stupid or silly in Spanish...

Alternative Micro Show

There were many more QL-related stands at the Alternative Micro Show than for any other system. DP seemed to be attracting a lot of attention with The Solution, which was the only major new software product on show. Miracle Systems was demonstrating its new hard disk system. It is now running quite a bit faster than the last time I saw it (the driver software has been speeded up), and Miracle reckoned it is about ten times faster than a floppy drive.

EEC Ltd was selling QLs at bargain prices, including working boards for £25 - several people bought them for spares.

QL Adventurers Forum

Richard Alexander recently sent me a copy of his latest OLAF newsletter. Contents included a beginner's guide to adventure and strategy games, reviews, notes, maps etc. The group also has a library of public domain games. Highly recommended if you are interested in adventure-type games on the QL. Subscription £5 for six issues, from CGH Services, Cwm Gwen Hall, Pencader, Dyfed, Cymru SA39 9HA. Cheques payable to Richard Alexander.

John Torofex

ATARI 520 ST-FM SUPER PACK WITH £450 WORTH OF SOFTWARE £369.99

ATARI 1040 ST-FM SUPER PACK £469.99

31/2"	40 CAPACITY STORAGE BOX	£4.95
51/4"	50 CAPACITY STORAGE BOX	£3.99

51/4" DSDD BULK IN LIBRARY CASE £4.50 FOR 10

31/2" DSDD 1MB 135TPI BULK £8.50 FOR 10

3M 31/2" DSDD £10.99 FOR 10

SKC 31/2" DSDD £9.99 FOR 10

31/2" DISKS HEADCLEANING KIT £2.99

SPECIAL OFFER

40 CAP. 31/2" STORAGE BOX
25 31/2" DSDD 1MB DISK £25.00



DEALERS! CALL US NOW FOR BEST PRICES.
ALL PRICES INCLUDE V.A.T. AND DELIVERY

Callers 091 516 0065

OR send cheque or P.O. with your order

SECTOR SOFTWARE

Established 1985

0772 454328

Commodore Amiga A500 Computer with Modulator, Mouse, Workbench, BASIC disk, Extras disk and 10 FREE games

£389.00

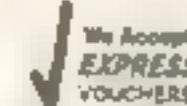
Please note that the free Modulator offer will be dropped by Commodore from 1st April. Order early to avoid disappointment.

Workbench 1.3 Upgrade for Amiga owners	£15.00
Brother M1109 Printer	£155.00
Star LC10 Colour Printer	£275.00
Star LC10 Mono Printer	£240.00
Star LC2410 Printer (24 pin quality dot matrix)	£374.00

Bulk 3.5" Disks at the LOW PRICE of £1.00 each	
Philips CM8833 Stereo Monitor	£239.00
Amiga Write Cartridge	£15.00
Star Laserprinter 8	£2195.00
Brother HR40 Daisywheel (136 col)	£1095.00
Star NB24-10P (216 cps, 24 pin, 80 col)	£757.00
Brother HR20 (20 cps, Daisywheel, 80 col)	£499.00
Hi-Soft Basic compiler for the Amiga	£79.00
Amiga BBC Emulator	£45.00
Deluxe Paint 3	£75.00

Sector Software are suppliers of Quality software for the Sinclair QL and currently have 14 titles in our range. Phone or write for our full catalogue of QL items.

SECTOR SOFTWARE



39 WRAY CRESCENT

ULNES WALTON

LEYLAND

LANCASHIRE

PR5 3NA

TEL: 0772 454328 FAX: 0772 454680



Shockproof Bees!

Whompf no. Crrump it went, just about the loudest bang you are ever likely to hear. The polystyrene ceiling tiles in the office bounced down, and then up and the windows rattled in their frames.

But as a fine dust settled we quickly realized that we were lucky. Next door the windows were blown out, and the ceiling was down. Farther down the road, roofs were blown off and debris was scattered everywhere. In fact the whole area looked as though it had been strafed by the Luftwaffe. What happened was that a van carrying explosives had exploded not more than 200 yards from our office killing one fireman and injuring eighty. The resultant blast had devastated a large area with the damage running into millions of pounds.

What's this got to do with computers, you may well ask? Frankly nothing, but for the fact that our BBC computers carried on running sweetly throughout with nary a hitch. Guess what happened next, yes you guessed it, your inestimable editor phoned requesting some copy. At least this time I had a good excuse!

Acorn ups the ante

Most computer firms find that the best way to sell more machines is to reduce prices. However Acorn have decided to try and buck

this trend by actually increasing prices. A Master 128 goes from £399 to £439, and an Arc 310 from £835 to £899. At the same time it has also set educational price levels at £349 and £720 (all excluding VAT of course) respectively.

All this takes place from April 3rd, so by the time you read this it will be too late to get round the increases. At first sight the changes seem wholly without logic. Acorn's pricing policy has always been one of their weak points, and to tinker with it now would appear to be madness.

However a little analysis might prove illuminating. Acorn has the education market sewn up, and that is a fact. It has done this by virtually giving away large numbers of machines. Now it can afford to stabilise prices, and clean up.

As far as the home market goes, I would guess that the changes reflect the forthcoming home Archimedes, and the furious mail order discounting that has been going on recently.

Where does all this leave the average punter? Pretty confused I should say and angry that Acorn once again have moved the goalposts. It will also stimulate the flourishing second hand market still further.

Andrew Brown

Second hand bargains

If you are in the market for a used Beeb then I suggest you go for an Issue 7 model, they are usually more reliable. Avoid machines with the 8271 chip, and watch out for cracked boards, loose ROM sockets and damaged disk drive connectors.



Read only

So far I haven't touched on the subject of books for the would-be MSX programmer, mainly because many are out of print or are slightly dated.

One book though that you still might find available from the better MSX stockist is *The Complete MSX Programmers' Guide*, published by Melbourne House. Although this book appears to be out of print, I have seen it at knock-down prices in certain computer stores. Its original price was £14.95, but even at this price it was a bargain. For anyone thinking of using their MSX for more than games, or who would like to write BASIC programs or delve into machine code, this book is a must. When this book was first published it was voted the best reference book for any home micro on the market. Try L Chittenden Ltd on 0494 784441. I know that they had a few copies in stock, though at the full recommended price.

Playtime
Latest news for MSX gamesters is that *Nemesis 3* is now available, and although I've yet to receive a copy for review, it should prove to be every bit as good as Konami's previous *Nemesis* series releases.

Blasteroids, from Mirrorsoft, should also be available as you read this, as should *3D Pool* from Firebird. The main feature of this latter game is the ability to walk around the table and view the shot from any angle - quite a feat of programming. *3D Pool* is due for release on the 18th April, priced £7.99.

I'm often asked if it's possible to buy joysticks with two separate fire buttons, as many Konami games require this feature to play them successfully. Three to look out for are the *Captain Grant* at £16.95, the *Euromax MSX* at £18.95 and the *Quickshot V* from around £10. Tavistock Hi-Fi in Bedford (0234 56323) stocks the *Captain Grant*, *Nightmare of Torquay* (0803 606146) stocks the *Euromax* and the *Quickshot V* can be found on many market stalls which deal in electrical products.

the name will bring in members from a wider area, even abroad.

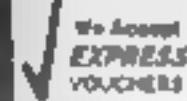
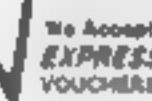
The group is run by Craig Bell, and it publishes a monthly 12-page colour newsletter (which I have yet to see) for the yearly membership fee of £6.95.

The address is North Lodge, Cairnhill Road, Airdrie, Lanarkshire, Scotland ML6 9RJ. That's the plug for the group. Craig, now how about a copy of the newsletter?

Keith Neal

COMPUTER CONNECTIONS

TOP QUALITY Centronics Parallel Printer Cable
(RS232 end screw fixing) - 2 metres £5.99!!
Suitable for All Atari STs and Amiga A500/A2000s,



AMSTRAD CPC 464 & 128	15 metres! 7.5 metres £44.99 15 metres £49.99
6 pin din plug to 6 pin din socket monitor extn lead 2.5m	£5.75
2.1mm Power plug to 2.1mm Power socket power extn lead 2.5m	£6.50
Both of the above cables 1.0m..£10.50 2.5m..£11.99	
34 way edge conn to 36 way centronics plug + parallel printer lead 1.0m £8.99 2.0m £9.99	
34 way edge conn to 36 way IDC socket for second disk drive 1.0m	£7.95
SINCLAIR SPECTRUM	
8 pin din plug & 3.5mm jack plug to Scart plug for 128+128+2 TV/Monitor with Scart socket 2.0m	£8.95
9 way D plug to 9 way D plug joystick adaptor for Atari style joysticks 1.0m	£5.50
9 way D plug to 25 way D plug, Sinclair interface 1 to printer with RS232C serial interface 1.0m	£4.95
2.0m	£5.95
COMMODORE CBM64	
5 pin din plug to Scart lead 2.0m	£5.99
5 pin din plug to Phono Plug - to Colour monitor 2.0m	£4.99
6 pin din plug to 6 pin din socket - serial port extension 2.5m	£5.75

CABLES! CABLES! CABLES!

Standard Centronics Printer Cables for IBM, PC, Atari ST, CBM, Amiga 500/2000 etc. 25 way RS232 plug to 36 way centronics plug - High quality screened cable with Thumbscrews.
2.0m £6.99 - 3.0m £9.99 - 5m £12.99
Ultra high quality centronics parallel printer cable with very heavy shielding for situations involving printers sited beyond the normal 5 metre limit of the parallel interface. They allow for transmission up to

Large range of cables available for PC & compatibles, all Amstrads, Spectrum, Amica, Apple Mac, Commodore Amiga, 64 & 128, Atari ST, XL/XE, MSX and more. Just write for full product list.

Please make cheques and Postal Orders payable to:
COMPUTER CONNECTIONS Telephone 03548 590 Credit Card orders accepted on Access/Mastercard/Eurocard. 03548 590
All orders under £5 please add 50p. Over £5 P&P free.
Ashlawn House, Exmoor Drive, Christchurch, WISBECH, CAMBS. PE14 9LS

The Instant Catalog

ALL TITLES IN STOCK

SPECTRUM	C64	COMMODORE 64	C128	DISK	ATARI ST	Disk
4 Soccer Simulators	6.45	4 Soccer Simulators	6.50	9.25	5 Star Compilation	14.75
After Burner	6.45	10 Great Games Vol 3	9.99	11.90	Action ST Compilation	11.99
Berserker II	6.45	Afterburner	6.95	9.90	After Burner	13.99
Bard's Tale	6.50	Amalete	6.45	8.75	Batman	12.50
Batman - Caped Crusader	5.95	Berserker II	6.45	8.75	Bomberman	14.75
Command Performance	9.99	Berserker - Caped Crusader	6.45	9.45	Captain Fuzz	9.99
Cyberoid II	5.50	Bomberman	6.45	8.75	Crazy Cars II	12.50
Exploding Fist Plus	5.25	Caveman Ugh-Lympics	7.25	10.50	Double Dragon	11.99
Fists 'N' Throttles	8.75	Command Performance	9.99	10.75	Dungeon Master	14.75
Football Manager II	5.75	Crazy Cars	6.50	9.50	Eliminator	13.99
Frank Bruno's Big Box	8.75	Cyberoid II	6.45	9.99	Etee	14.75
Game Over II	6.50	Double Dragon	6.50	9.99	Falcon	15.50
Game Set and Match 2	8.75	Emily Hughes Int Soccer	6.45	8.75	Flying Shark	14.75
Giants	9.99	Exploding Fist Plus	6.45	8.75	Ganfield	11.99
Gold Silver Bronze	9.99	Fiesta 'N' Throttles	8.75	9.99	Hercules of Lance AD&D	17.25
Heroes of the Lance	7.99	Football Manager II	6.45	9.99	Hostages	14.75
In Crowd - Compilation	8.75	Frank Bruno's Big Box	8.75	9.99	International Karate (IK+)	11.99
Laser Squad	6.25	Game Set and Match 2	8.75	11.99	Joan of Arc	13.99
Last Ninja II	8.95	Giants	9.99	11.99	Leaderboard Birdie	13.99
Leader Board Par 3	9.99	Last Ninja 2	8.75	9.99	Leslie Surf Larry II	21.50
Mega Games Vol 1	9.95	Leader Board Par 4	10.99	12.99	Lombard RAC Rally	14.75
Mickey Mouse	5.25	Mega Games Vol 1	9.99	10.99	Manhattan Dealers	12.50
Operation Wolf	5.50	Menace	6.75	12.95	Mickey Mouse	13.99
Pacmania	5.95	Dragon Ninja	6.75	9.99	Operation Wolf	11.99
R-Type	6.45	Microprose Micro Soccer	9.95	12.99	Pacmania	11.99
Rambo III	5.95	Operation Wall	6.45	9.99	Powerdrome	17.25
Return of the Jedi	6.45	Pacmania	6.45	9.99	Purple Satin Day	14.75
Road Blasters	5.99	Rambo III	6.45	9.99	R-Type	17.25
Robocop	6.25	Robocop	6.45	9.99	Rambo III	11.99
Savage	5.95	R-Type	6.45	9.99	SDI	13.99
Sorting Image	6.45	Sports World 88	9.99	10.99	STOS - Games Creator	19.49
Supreme Challenge	6.75	Supreme Challenge	6.75	11.50	Speedball	14.75
Taito Coin-op Hits	8.95	Taito Coin-op Hits	9.99	12.99	Teenage Queen	11.50
Techno Cop	5.50	Thunder Blade	6.95	10.99	Times of Lore	15.25
Thunder Blade	6.50	Tiger Road	6.95	10.99	Thunder Blade	13.99
Tiger Road	6.25	Times of Lore	6.45	8.99	Trax Vol 1	17.48
Total Eclipse	6.45	In Crowd - Compilation	9.99	11.99	Wanted	11.50
Ultimate - The Works	8.95	Techno Cop	7.45	10.75		



INSTANT, Boston House, Abbey Park Road, Leicester LE4 5AN

Mail Order Only. State Computer's make and model.

P&P: 50p on orders under £5, EEC 75p per title.

Whole World £1.50 per title for Air Mail.

New titles sent on the day of release.



0533 510102

FOR DISK PRICES & NEW RELEASES PLEASE RING US.

ACTUAL SCREENSHOTS

A new software label setting new standards in Computer Gaming requires **CODERS** and **GRAPHIC ARTISTS** for the **AMIGA, ATARI ST** and **PC MACHINES**, capable of producing the **BEST** the Medium has to offer.

If you think you've got what it takes, contact
ADRIAN TURNER at
ACTUAL SCREENSHOTS
immediately on
(01) 533 2918
or send C.V.'s and DEMOS to:
UNIT 7D, KING'S YARD, CARPENTERS ROAD,
LONDON, E15 2HD

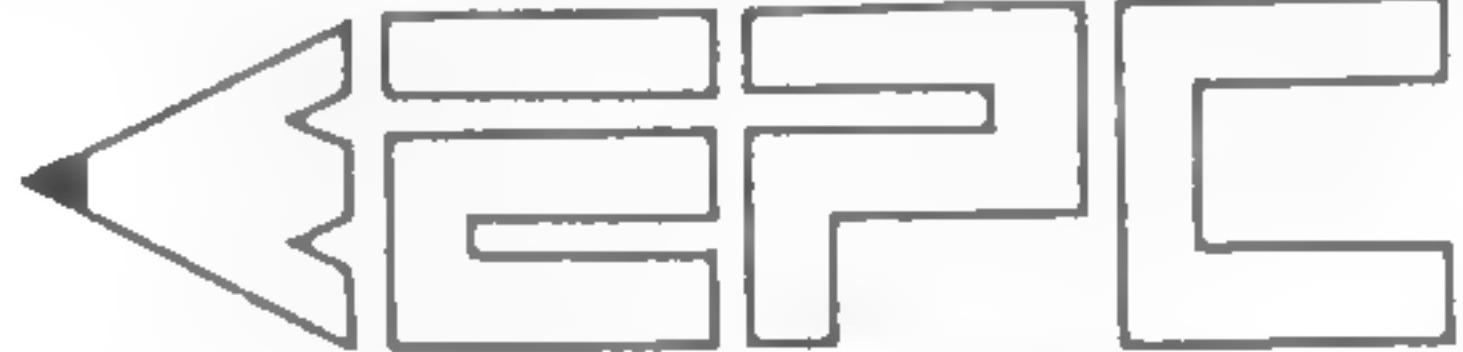
P. D. Systems

Full time assembly language programmers (preferably 8086) are urgently required. IBM PC, MSDOS, or PDS knowledge will be useful.

We are offering **TOP** wages, for experienced, or quick learning capable programmers.

PDS is now the industry standard development system. If you have used, or heard of the system, or feel you would like to work on serious application software, then call or write to us immediately.

P.D. Systems
2nd Floor, Abbey House,
Wandsworth Road, London, SW8 4TE
Telephone: 01-978 1844 Fax: 01-622 2719



SO!

You're bright, talented and enthusiastic.

AND

You've probably had some programming experience (preferably at Assembler level).

OR

Your graphical abilities are matched only by ours.

IF

You're interested in joining a friendly and creative team who design and develop 16-Bit games as well as TV and video graphics.

THEN

We'd like to hear from you! Please send CV's and demos to WING LAI at

ELECTRONIC PENCIL CO
SECOND FLOOR, 447 GREEN LANES, HARINGEY, LONDON N4 1HA
OR RING 01-341-6866

MACHINE-SPECIFIC COLUMNS



Insider trading

Take a look at the Microbiography in this issue of Express, for it concerns the CPC - which as you may or may not know celebrates its fifth anniversary this very week (11 April, 1984, to be precise)

It's easy looking back to assume that everyone expected that the CPC would be a massive success, but in fact it wasn't like that at all. At the time Amstrad was known chiefly for its not very special car radios and hi-fis, and must have looked a very risky bet to succeed in the quagmire of home computing, where so many others had failed - and continue to do so. Indeed, I know of only one person involved in the project (I can't name him) who had the confidence to invest in Amstrad shares. He bravely sank his life savings into them - and watched as they rose by a factor of ten over a single year!

Incidentally, there's a slight twist to the now famous story of 'Arnold,' the codename for the secret new machine. Richard Clayton of Locomotive Software was one of the very first to see the prototype, when it had actually been labelled 'Arnold' on the plastic casing by project co-ordinator Roland Perry. (Perry claims it wasn't for months afterwards that he realised - or more accurately had it pointed out to him - that Arnold is an anagram of his own name.) But, Clayton recalls, when he opened up the prototype, there was the word Amstrad printed in big bold letters on the circuit board! It's fortunate that he'd never heard of the company, for otherwise he might not have been so keen to become involved.

two packages of Choice Cheats. Volume One will prevent you getting 'zapped' in *By Fair Means or Foul*, *Cybernoid*, *Operation Wolf* and nine others; Volume Two does the same for *Bad Dude V*, *Dragon Ninja*, *Arkanoids I & II*, *Head Over Heels* and half a dozen others.

Each costs a fiver on disc or £3 on tape from 1st Choice: phone 0706 72728.

Immortality for Ikari Warriors

And while we're on the subject of infinite lives, cheats, pokes and all that stuff, here's one for free.

It's always been a favourite game of mine, has *Ikari Warriors*, ever since I got it for Christmas back in '83 (pity I didn't get a computer until the following summer, but there you go). It's a great graphics, two-player Commando-type (remember Commander?) smooth downward scrolling, mindlessly



addictive, guns 'n' grenade blasting, bombs 'n' bullets jungle shoot-em-up. Get the picture? Anyway, my big problem, of course, was getting shot down in flames and killed on a permanent basis much too soon. I got pretty tired, I can tell you, of having to pick myself up, dust myself down and start all over again.

So this short disc poke is just the job: you simply type it in and use it when immortality takes your fancy.

1 'Ikari Warriors - disk

2 'by Brian Warming

3 'NCE 15/4/89

40 FOR a=0 TO 51

40 READ a\$

50 POKE 64+a, VAL("6"+a\$)

60 NEXT a:CALL 64

70 DATA 3E, FF, CD, 6B, BC, 06

80 DATA 09, 21, 6B, 09, 11, 09

90 DATA 01, CD, 77, BC, 21, 09

100 DATA 01, CD, 83, BC, CD, 7A

110 DATA BC, 3E, 01, 32, 77, 05

120 DATA 3E, 40, 32, B1, 0E, 3E

130 DATA 40, 32, EB, 5C, C3, 09

140 DATA 01, 49, 4B, 41, 52, 49

150 DATA 2E, 47, 41, 4D

Football madness

All of a sudden, for some reason I'm quite unable to fathom, football simulators are flooding onto the market faster than novelty knickers at Christmas. Code Masters was quick onto the wagon, natch, with *Four Soccer Simulators*, with the spin-off *Street Gang Soccer* soon to follow. Then there's the *head-on* entitled *Microprose Soccer*. And of course there are the usual name-games: *Emlyn Hughes International Soccer*, *Gary Lineker's Hot-Shots* and *Steve Carey's Thundering Left Foot Volley Goes Miles Over the Bar Simulator*.

Now I've always been a Matchday (I mean myself, a game I find myself returning to frequently. But I've seen pre-production versions of both the *Crazy Horse* and *Gazza* soccer sims, and I must admit that they look as if they'll be serious competition for the old Ocean classic. And although the *Microprose* game was originally written in the states I'll wager a small bet that it too will have the usual mark of quality.

But that still leaves the question: why so many soccer sims all of a sudden?

Chris Price is a Cheat

Ex-teacher and professional programmer Chris Price is the last person you'd expect to be encouraging people to cheat. Chris left teaching to work as a full-time programmer and has worked on such projects as *Fun School 2*, *Red Arrows*, *Mini Office* and *Micro Olympics*. But now, with 1st Choice Software, he's a gamekeeper turned poacher (or something like that), for his first releases are

Every Second Counts

Don't know if you have any time for that undersized immensely irritating magician Paul 'You'll like it, but not a lot' (all together now, OH NO WE WON'T) Daniels. No, neither do I. But an aged aunt of mine who thinks the sun shines out of his fundament told me very excitedly that 'one of those Seepy Cease you're always going on about, sonnie' was a prize on *Every Second Counts* a couple of weeks ago (1 April actually, but this is not, repeat not a delayed April's Fool story). Oh aight then I'll come clean, it wasn't my aunt it was me: I was that couch potato.

A cruel friend, who shall remain nameless (in fact it was Express editor Rob Ainsley) viciously enquired whether, if the second prize was a CPC, was the third prize two CPCs? Ha ha Rob, most amusing. On a more serious note I'd suggest that the idea came from *Which?* magazine. Last November the CPC was recommended yet again as an excellent low-priced computer. Not that we need telling, of course.

Steve Carey

EXPRESS EXPRESS

SALES

"DOGTRACK" Greyhound Racing from analyser (+ game)
 "POOLS" Program with form input
ONLY £1.99 each!

Please send cheque/P.O. to:
 John Lewis, 157 Hamilton Avenue,
 Tolworth, Surrey.

MID SUTHERLAND DATA

PC SOFTWARE
 PARROT DISKETTES
 PHONE NOW FOR DETAILS
0862 3728

PC File Plus V2(3)	£5.00
PC Calc Plus (3)	£5.00
PC Type Plus (3)	£5.00
PC Type (3)	£5.00
N. York Word (3)	£5.00
Freeway Acc Plus..	£5.00
PC File db (3)	£5.00
■ or 3 disc sets 5 1/4" £5.00 3 1/2" £5.00	
Ring for a price and special offers on the Schneider Euro PC Range & Euro PC.	

only £1.75

per disc fully incl Quick Taste
 PC Railroad
 Galaxy 2.4
 Ford Car
 Magic Menus
 Scrabble
 Forging
 Painters Pal
 Flow Charts
 E2 Forms
 Fantastic
 French Tutor
 + 100 MORE!

EURO PC

Softcell Services

10 5 1/4 Discs £16.00,
 3 1/2 Discs £25.00
 For further details write or phone
 for a FREE catalogue

Dept NCE 9 Wells St
 Cardiff CF1 8DW
 Tel Cardiff (0222) 222895 anytime

THE ULTIMATE INVESTMENT!!



SPEED TIPSTER FROM PREMIERSOFT

Speed Tipster is the Fastest and Easiest Horse Tipster to use of any Horse Tipster Programs currently for sale. Performance is staggering to say the least. £1740 Clear Profit to a £10 Stake. But don't take our word for it. This is what an investor from Herts said:-

"A cracking bit of Software. I'd struggled with another product and lost £20 in six weeks. Not only that, it took ages to type in the data and cost nearly four times as much as yours. Your miraculous Speed Tipster, however, won first time out and since then I've had 16-1 Winner and a couple of others. Beats me how it does it!"

NEED WE SAY ANY MORE!!

COST? ONLY £15.00 inc TAX & P&P
 AVAILABLE FOR ATARI ST MED/LOW RES
 MAIL ORDER ONLY
 COMING SOON FOR SPECTRUM C64 AND BBC/ELECTRON

FROM: PREMIERSOFT
 46, WADHAM ROAD,
 PORTSMOUTH
 PO2 9EE

THIS SPACE ATTRACTS ATTENTION! FOR JUST £14

CALL SARAH KING TO RESERVE YOUR
 SPACE NOW!!
 ON 0225 446034

ATARI ST PUBLIC DOMAIN

Wordprocessors Games Utilities Music
 Languages Art Educational
 and even DTP progs from £1.75!
 You'll be amazed at our Premier Service
 For a FREE catalogue send a 19p stamp to
 ALPHA COMPUTING
 32 Meadow Drive, Halifax, W.Yorks HX3 5JZ

ATARI ST PIRATE PACK



Pirate Software has collected the highest quality Atari ST Public Domain Software and brought them together on the ST Pirate Pack Collection. Over 30 Titles of the best Public Domain Software around. Available on 10 Single Sided Disks or 5 Double Sided Disks. All orders will receive a FREE 10 Disk Storage Box. The Best Games plus the Best Word Processor, Database, Spreadsheet and Art Programmes available.

For under 49p per title.

This Pack is exclusive to Pirate Software.
 Send a Cheque or Postal Order payable to:

PIRATE SOFTWARE

for 10 Single Sided Disk Pack for only £19.99 or
 5 Double Sided Disk Pack for only £14.99

PIRATE SOFTWARE

36, CHESTER ST.
 NEWCASTLE ON TYNE
 NE2 1AV

GOODMAN P.D.L.

Established as one of Britain's leading suppliers of Public Domain Software for the Atari ST. The Catalogue gives details of the 100's of programmes that are now available including games utilities Demo's etc. Prices from only £2 fully inclusive or from 75p if you supply your own discs. Send a 19p stamp for further details.

GOODMAN P.D.L.
 16 Conrad Close, Meir Hay Estate,
 Longton, Stoke-on-Trent ST3 1SW
 0782 335650

PROGRAMMERS PUBLIC DOMAIN LIBRARY
 FOR THE VERY BEST UTILITIES, SOURCE CODE ASSEMBLERS, COMPILERS, ETC. FOR
 THE ATARI ST PROGRAMMER
 All languages catered for:
 For FREE catalogue send 19p stamp to:

ZZ SOFT
 3, RIVERDALE HOUSE, MYTNOLM CLOSE,
 HEBDEN BRIDGE, W. YORKS. HX7 6BP
 Run by a programmer for programmers!
 0422 845528

ATTENTION! AMIGA, ST, 64 OWNERS

SOFTWARE AT VERY LOW PRICES.
 ROBOCOP TO ACCOUNTS PROGRAMS.
 £1-£5. NOWHERE CHEAPER.
 For Amiga & ST Software.
 SENO £1 (Cheque/P.O./Cash) for Catalogue
 payable to C. Acorn

Send to:
 ELITE MICROS
 7 Goulding Court, Clarendon Road,
 London, N8 0DB

ST/AMIGA HARDWARE AND SOFTWARE - B-BYTES

Expert advice and keen prices.
 HOME AND EDUCATIONAL - B.WARE KIDSOF, B.Spell, B.Base 2: Kidssoft Maths, Playspell - All £14.95 each.
 Construction Set and Data Disks at £9.99 each.
 See us on Stand 26 & 27 at Essex Computer Games Show, April 21st - 23rd.

B.WARE-B.BYTES.
 DEPT NCE 111 SOUTHFIELD ROAD
 HINCKLEY, LEICESTERSHIRE, LE10 1UA
 0455 613377

Mon - Sat 9am - 5.30pm

G.V.L.S.

Fuji 31/2" DS/DD 135TPI £1.60 each
 Fuji 51/4" DS/DD 48/96 TPI £1.10/£1.40
 51/4" & 31/2" Cleaning Kit £3.50
 31/2" 80 Lockable Box £7.99

Orders under £20 p+p £1.50

0742 884183
 92, Firtree Estate,
 Thurgoland, Sheffield, S30 7BG

MATRIX SOFTWARE HIRE
 THE CHEAPEST WAY TO PLAY THEM ALL
 Top games titles for Spectrum, Commodore and Amstrad, please state system
 S.A.E. for Details from

Matrix Leisure Club
 Dept N.C.E., 271 Stanstead Road,
 Bishops Stortford, Herts CM23 2BT

MISSION IMPOSSIBLE BBS

Megabytes of files to download
 24 hours a day
 Resident professional systems engineer for tech queries
 Latest US files available
 Rip-off suppliers section
0 6 0 2 - 6 5 4 3 2 9

ALADDINK

PCW 9512 CARBON FILM RIBBONS
 £2 Each plus 99p per order
 (order 1 or more) Send £1.99 etc
 Send your USH carbon-film cassettes with payment to
 ALADDINK, (Dept. C.E.), Eyemouth,
 Berwickshire, TD14 5AP
 Also fabric ribbons re-inked for most printers. Send S.A.E.
 for details stating printer make & model, or
 Telephone 0860 789685 to Spain

FREE !!! (1 per Household)
 Wrap Around 3 1/2" Disk Labels
 S.A.E. to: N.B.S. (Label Offer)
 21, Priory Rd, Newport, Isle of Wight

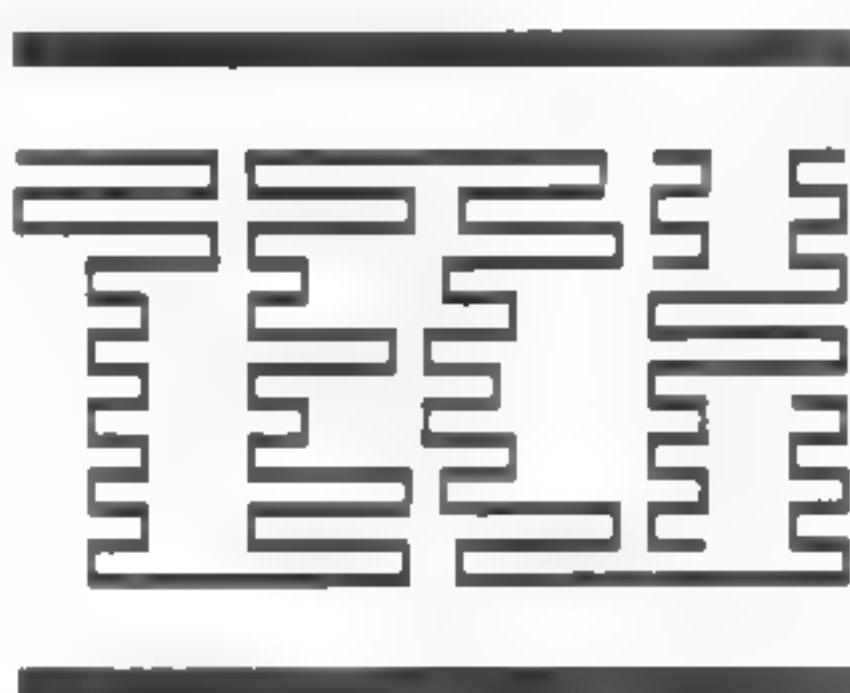
WANTED

ALL COMPUTER
 HARDWARE/SOFTWARE WANTED
 FOR CASH OR EXCHANGE
 NOTHING REFUSED!!
01 727 0424

WANTED



An Arabian Exporting Company will pay top cash, I repeat TOP CASH, for any computers, photocopiers, telephone systems or any other business machine on behalf of their eager buyer in the Middle East. Unlimited cash available for immediate decision. Please phone
01 360 8095
01 360 3305 or FAX 01 3603757



HELP!

Not switched on

I recently bought a Commodore A500 computer after recommendations from friends at college. When I got it home, I experienced a certain amount of trouble trying to switch it on. I have checked the wiring in the plug and the power cable is correctly inserted into the computer but I cannot work out why it won't come on.

I asked my friends at college and they said try the on-off switch. Where is the on-off switch? I have looked over my computer, but I can't find it anywhere.

Ian Sutherland, Goreyton (I might have guessed - Tech Ed), Gt. Yarmouth

• Who is this guy? Is this an April Fool's

TIP

Microhelp

Problems with microdrives (...and there are lots - Tech Ed) are almost invariably due to oxide forming on the (double sided) edge connections of the main p.c.b. (Printed Circuit Board, to the uninitiated - Tech Ed). I have had no trouble since adopting the rather unorthodox solution of smearing the connector pads with 3-in-1 oil occasionally.

The fixing screws on Interface one can be left undone, to facilitate access to the p.c.b. A little oil should also be smeared on the microdrive connector pads on Interface one p.c.b.

Some users may not know that a runaway microdrive motor can be stopped by (...tearing it from the



• The Commodore Amiga: Graphically stunning and arguably the best of all the home games micros - but how do you turn it on?

joke, or what? OK. Just in case you are a poor schmuck who doesn't know where the on-off switch is, try looking at the power supply. Jeez, where (or more to the point: why...?) do we get 'em.

TIP

Brother cable

With reference to Andrew Richardson's letter about the Commodore 64 and the Brother HR5, it is possible to connect the two with just a cheap cable. I got mine for just £15 from GL Systems, but these cables cannot be used without a driver, so listings etc., are not possible (Then what's the point? - Tech Ed). Not all software is compatible either. York Electronic Research (0904 610722) supply one with driver software for £18.99. The cables will work with any

computer and hurling through a conveniently open window - Tech Ed) entering CAT with no following number.

Hugh Griffiths, Hereford

HELP!

CPC/PC query

At present I own an Amstrad CPC 464 colour system with about one hundred pieces of tape software. I would like a PC based system. Could you suggest a system with which I can also use my colour monitor and software?

Alan Jones, Kilmarnock, Scotland

• Check out my feature all about budget PC systems in this week's issue. If you do buy a PC, write to me again for a circuit which will allow you to connect your Amstrad colour monitor to a PC. I'm

Epson compatible printer. By the way, if you're finding HR5 ribbons a bit expensive, then W.H. Smiths sell single sheets of white A4 thermal paper for just £5.50 for a packet of 100 sheets - fantastic value!

Paul Davey,
Pontypool, Gwen

TIP Good old stick Supernorm

If you've got a joystick, you'll be missing the life of the buttons off the Competition Pro joystick (normal black version). These buttons tend to become unresponsive after a few months of normal use.

If you have some epoxy resin and some retractable ball pens... First, send the Auries out of the room. Tech Ed) remove the socks from the pens. Undo the four screws at the bottom of the joystick and remove the

bottom. Place the epoxy resin over each button, from the inside, and push down gently but firmly - the button should come apart. Now place the spring over the button and push the button back into place in the joystick. Repeat with the other button, then reassemble joystick. By filling your buttons with springs, they will last longer than if you leave them pressed accidentally.

Norm Tiers, London

afraid you won't be able to use any of your current software with the PC.

TIP

Twice as wide

I am writing to offer an 80-column screen utility for the Commodore Plus 4 to Paul Clancy (ish 20). Please tell him that if he gets in touch with me at the address below, I will send it together with details and instructions.

Kev Bromfield, 14 Queens Road,
Budleigh Salterton, Devon EX9 6QJ

HELP!

Apple/Beeb hybrid?

I have recently acquired an Apple IIe computer complete with a Super Serial card. The world of Apple computing is new to me as I have been using my ace BBC model B since 1983.

I have noticed that these 6502 based machines have a very similar version of BASIC. I was wondering whether I could use the Apple as a second processor for my Beeb.

I am very interested in programming and would like to increase the speed of my Beeb using another processor. Also, the Apple has two 5.25" disk drives. Could I use them with my Beeb?

Thank you very much and keep up the good work!

Peter J. Cumberland, Epsom, Surrey

• Nice try PJ, but it just won't work. If you want to speed up your programs, then swap the Apple for a good assembler and write your programs using that. Disk drives? Hmm, the Apple drives have a lot of controlling circuitry built in and

TIP

Loading the 64c

In ish 21 you printed a letter from Ron James of Preston having difficulty loading C64c games.

I too have this problem and found it was due to two things. The cassette recorder lead being too close to the TV and the C64c being sensitive to tape tension. Try fast-forwarding the tape to the end, rewinding and try again. I found this cures 99% of tape-loading problems on my games.

Alan Johnson, Oldham, Lancs

probably more trouble than it's worth to adapt for your beeb.

HELP!

End of the line

At a closing down sale (oh no! I just know what's coming - Tech Ed) I bought an Atari PC1 with 640k, EGA, one 5.25" drive (...it's worse than I thought...) the lot in fact, or so I thought. (and now you can't do anything with it, am I right?) After weeks of inserting MSDOS, extracting MSDOS, inserting GEM... (edited here to spare the weak of heart)

Do you know where I can find an interface or connector so that I might use a hard drive?

Harry Harper, Coventry

• Look, everyone out there in consumerland, why don't you just buy the machine that you want, need and can use, rather than end-of-line cheaps and discontinued products from barrow-boys or box-shifters. The Atari PC1 is well made,



• Closing-down sales are great for bargains. Just make sure you end up with something you can use...

reliable and a fine machine – if it can do what you want it to (as with any machine).

As for expansion boxes, I'm afraid I haven't been able to come up with any details, but if anyone reading this knows of an interface to connect a hard drive then please let me know and I'll pass on the info.

TIP**Interface solution**

In response to Mr. Richardson's interface problem (Express 'ish 20), I suggest the Centronics interface supplied by Stack/Meedmore. The cost is £12 for the cable and driver software on disk and tape. Meedmore can be contacted at: 28 Farriers Way, Netherton, Merseyside L30 4XL. Tel: 051 521 2202.

James Graham, Princes Risborough, Bucks

HELP!**Smaller drive**

I'm just about to purchase an Amstrad PPC512 portable. It has a built-in 3.5" disk drive. The problem is I've got some software on 5.25"



* Amstrad's PPC comes with a 3.5" drive - but what about 5.25" software?

Win a sub!

We want to hear your problems, but we also want helpful hints and tips. And reports of those bugs you've found, from the comical to the downright frustrating. You could scoop the weekly best-tip prize of a brilliant piece of software for your machine, or even a free 26-issue subscription!

And remember, there's no waiting around for monthly publication dates. The best tips, and solutions to your problems will be in print before you can say Alan Sugar. (Please don't send SAEs for replies, we can only answer enquiries in print).

So whether it's help offered or needed, write to: Tech Tips, New Computer Express, 4 Queen Street, Bath, Avon BA1 1EJ.

disk – how can I use it? Is there a 5.25" disk drive available for it? If so how much is it and where can I get one? Is there a company anywhere who will transfer my software without breach of copyright?

J R W Snape, Blackburn, Lancs

- Most of the software available for the PC and its compatibles is available on 3.5" floppy as well as the more widely used 5.25" format. If you find that a particular package does not come with a 3.5" disk in the box, then try telephoning the software house responsible. They may be persuaded to exchange your 5.25" disks for 3.5" versions. Amstrad is about to release an expansion box which will allow the connection of several PC expansion cards, thereby allowing you to connect a 5.25" drive.

HELP! MSXasperating

Please can you help me. I bought a Spectrum 128 +2 and a Tandy printer DMP106. The cable is the RS232 serial printer cable.

I would like to use the printer with an MSX XH-10 and that's when my trouble started. I have tried a flat

parallel cable and a round 14-pin to 36-pin. With the flat cable I can LLIST and LPRINT but all I get is graphics. Changing the dip switches I can print Xs.

Is it possible that I have to change the baud rate as I do for the RS232? I can't get the MSX to change the baud rate.

Allan Pike, Selby, North Yorks

- Baud rates only apply if you are using serial communications. All I can suggest is that the printer has a dip switch to toggle between parallel and serial modes. Do you have a manual for the printer? Try looking for any information regarding the use of parallel signals to drive the printer.

TIP C64 digitiser

In Tech Tips (Express 'ish 21) you featured a letter from Adrian Sharp enquiring about a video digitiser for the Commodore 64.

It so happens that I have such a digitiser which I no longer use and software which saves or converts digitised screens to various formats for use in several paint packages (Koala, Art Studio, Printshop etc)

BUG OF THE WEEK

The Z88 comes with a good implementation of BBC BASIC. Unfortunately, there's no line editor. If you want to edit a BASIC listing you have to mess around with it in PipeDream. The manual describes how to do it, but it's extraordinarily time-consuming. Not exactly a bug, more a constant source of frustration.

Hon. Basil Pigg

• *Tribolium confusum*

Four species of this genus occur in central Europe. Single beetles are occasionally found in the open, e.g. in powdered wood in hollow trees, but normally they are confined to the interiors of small portables. Here, they graze peacefully on small pieces of machine-code.



I would be happy to flog this to Ade for a modest £1 sum.

Ian Anderson, 9 Lorn Avenue, Chryston, Glasgow G69 9LY

Block Line Transfer. The chip moves around whole blocks of 'screen lines' rather than individual pixels, thereby speeding up the process of displaying and animating graphics.

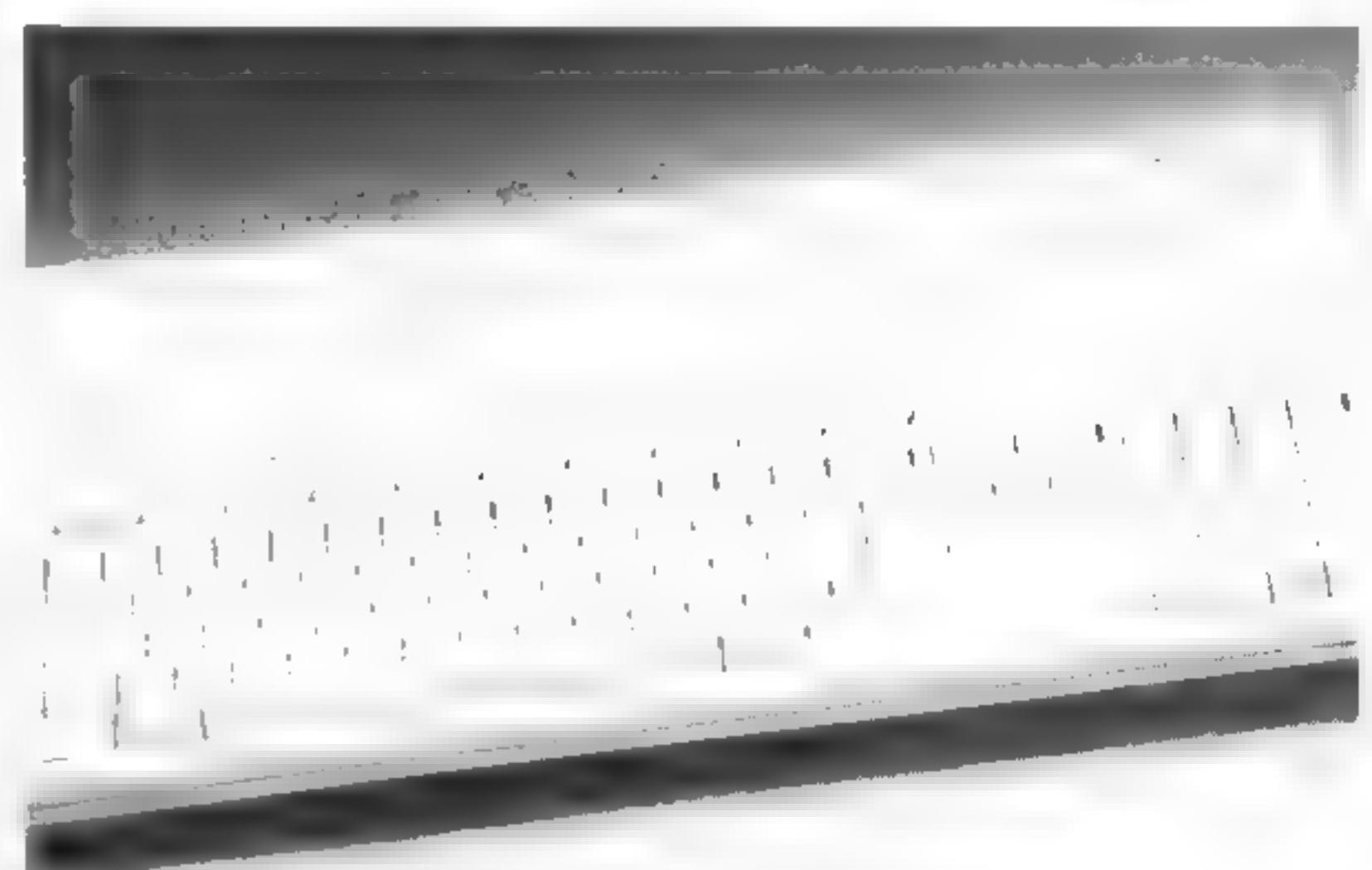
2. A RAM disk is – as its name suggests – a portion of spare RAM which is set aside for use as a fake disk drive, i.e. the operating system of the computer treats the portion of RAM as a real disk drive. The only thing to remember is to save the contents of the RAM disk before switching off the computer, otherwise it will be lost!

3. MS-DOS and CP/M are operating systems used by 8088/8086 (IBM-PC and compatibles) and Z80-based micros respectively. MS-DOS stands for MicroSoft Disk Operating System. CP/M stands for Control Program for Micros.

4. Yes, a BBC emulator is available in the public domain. Try Softville PD Service on 0705 266509.

5. The Phillips monitor is a good quality and reasonably priced VDU. Monitors are essential if you are going to use any serious software, such as wordprocessor or spreadsheet.

6. Both the emulators you mention are VERY capable. PC-Ditto is a little slow but works fine with all the well-known PC software packages. The Aladin gives a larger screen display than the Mac and runs Mac software up to 20% faster!



* Can you emulate the PC and BBC on the Atari ST? And what are RAM disks, blitter chips and what's the Philips 8833 monitor like and...

TITLE	S.S.P	OUR PRICE	TITLE	S.S.P	OUR PRICE	TITLE	S.S.P	OUR PRICE
Advanced Rugby Sim.	19.99	13.50	Obliterator	24.99	16.50	Dragon's Scape	19.95	13.50
Afterburner	24.99	16.50	Out Run	19.95	16.00	Borrodino	29.99	19.50
Airball	24.99	16.50	OverLander	19.99	13.50	Realms of Trolls	19.95	13.50
Airball Con Set	24.99	16.50	Offshore Warrior	24.99	16.50	Ballistix	19.99	13.50
Alien Syndrome	19.95	13.50	Ogre	24.99	16.50	The Deep	19.99	16.00
Alpine Games	9.99	7.50	Operation Wolt	24.99	16.50	Willows	24.99	16.50
Altair	19.99	13.50	Pluto's	19.95	13.50			
Arcade Force Four	24.99	19.50	Pool of Radiance	24.95	16.50	"SPECIAL OFFERS" While stocks last !!		
Arctic Fox	24.99	17.50	Pothole Pete	9.99	7.50	Borrowed Time	29.95	12.50
Arkanoid	19.99	13.50	PowerDrome	24.99	17.50	Crazy Cars II	24.99	12.50
Armageddon Man	19.99	14.50	PacMania	19.99	13.50	Golden Path	24.95	12.50
Baal	19.99	13.50	Pandora	19.99	13.50	Hacker	29.99	12.50
Barbarian	24.99	16.50	Pawn	19.99	13.50	Hacker II	29.99	12.50
Barbarian	19.99	10.50	Peter Beardsley	19.99	13.50	Hollywood Hixnx	29.99	12.50
Barbarian II	19.99	13.50	Phoenix	19.99	13.50	Hits Disc	24.99	12.50
Bards Tale I	24.99	17.50	Pink Panther	19.99	13.50	Karate	24.99	12.50
Batman	19.99	7.50	Platoon	19.95	13.50	Manhattan Dealer	24.99	12.50
Better Dead Than Alien	19.95	13.50	Predator	19.99	13.50	Metro Cross	19.99	12.50
Beyond The Ice Palace	19.99	13.50	Power Struggle	14.99	10.50	Mind Fighter	24.99	12.50
Billiards	19.99	13.50	Purple Saturn Day	24.99	16.50	Mind Shadow	29.99	12.50
Billiards French Style	19.95	13.50	Perfect Match	24.99	16.50	Moon Mist	29.99	12.50
Bionic Commando	19.95	16.00	President is Missing	24.99	16.50	Off Shore Warrior	24.99	12.50
BMX Simulator	14.99	10.50	Quadrailen	24.99	16.50	Shanghai	29.99	12.50
Bubble Bobble	19.99	13.50	Question II	24.99	19.50	Spell Breaker	29.99	12.50
Buggy Boy	19.99	13.50	Question of Sport	24.99	16.50	TASS Time	29.99	12.50
Bomb Jack	19.95	13.50	Rattles	19.99	13.50	Telltell	29.99	12.50
Captain Blood	24.99	16.50	Return To Genesis	19.99	13.50			
Captain Fizz	19.99	13.50	Rampage	14.99	10.50	UTILITIES		
Casino Roulette	19.99	13.50	Rolling Thunder	19.99	16.00	Adventure Art Studio	69.99	50.50
ChessMaster 2000	24.99	17.50	RoadWar 2000	24.99	19.50	Animator	79.95	60.50
Corruption	24.99	16.50	RoadRunner	24.99	16.50	Architectural Design Disk	29.95	21.50
Carrier Command	24.99	16.50	Roy of the Rovers	19.99	13.50	Art Director	49.95	32.50
Champion Wrestling	19.99	16.00	Revenge II	9.99	7.50	Back Pack	49.99	32.50
Champion Water Ski	19.99	16.00	Rockford	19.99	13.50	CAD 3D V 2.0 + Cybermate	89.95	62.50
Chess	24.99	16.50	Rambo III	24.99	16.50	CAD 3D Fonts & Printives	29.95	21.50
Crash Garrett	19.99	13.50	Ranarama	19.99	16.00	CAD 3D Architectural Design	29.95	21.50
Custodian	19.99	13.50	RoadWars	24.99	16.50	Crail	99.95	72.50
Dark Castle	24.99	16.50	RoadWar Europa	24.99	19.50	Cyber Control	59.95	45.50
Defender of the Crown	29.95	19.50	Shackled	19.99	13.50	Cyber Paint	69.95	45.50
Double Dragon	19.99	13.50	Side Arms	19.99	16.00	Cyber Sculpt	59.95	45.50
Dugger	19.99	13.50	Sapiers	19.99	13.50	Cyber Studio	79.95	60.50
Dungeon Master	24.99	16.50	Sky Fox	14.99	12.50	Phone for Details		
Deflector	19.99	16.00	Sky Fighter	14.99	10.50	Easy Draw II	59.95	45.50
Daley Thompson	19.99	13.50	Space Quest I	19.99	13.50	Easy Draw II Supercharged Ver	99.99	72.50
DaJa Vu	29.99	19.50	Star Trek	19.99	13.50	Easy Draw II General Library	29.95	21.50
Diablo	14.99	10.50	Scenery Disk No 7	19.99	13.50	Easy Draw II Technical Library	29.95	21.50
Dizzy Wizard	19.99	13.50	Scenery Disk No 11	19.99	13.50	Fast Assembler	19.95	16.50
Elli.	19.99	13.50	Scenery Disk Europe	19.99	13.50	Film Director	59.95	45.50
Empire	24.99	17.50	Scenery Disk Japan	19.99	13.50	Fleet Street Publisher	115.00	95.50
ECO	19.99	13.50	Shadowgate	24.95	16.50	F.T.L. Modulator II	69.95	50.50
Eddie Edwards Ski	19.99	13.50	Shutdown	9.99	7.50	Future Design Disc	24.95	17.50
Elite	24.99	16.50	Side Winder	9.99	7.50	G.F.A. Artist	49.95	32.50
Empire Strikes Back	19.99	13.50	Silent Service	24.99	16.50	G.F.A. Compiler	45.99	32.50
Epyx	29.95	19.50	Space Harrier	19.99	13.50	G.F.A. Basic Interpreter V3	45.95	32.50
Espionage	19.99	13.50	Space Quest II	19.99	13.50	G.F.A. Draft	99.99	72.50
Extensor	9.99	7.50	Spitfire 40	24.99	16.50	G.F.A. Draft Plus	139.95	115.00
Fahrenheit 451	24.99	16.50	StarWars	19.99	13.50	G.F.A. Sheet	45.99	32.50
Falcon	24.99	16.50	StarGlider II	24.99	16.50	G.F.A. Vector	34.95	26.50
Fire & Forget	24.99	16.50	Stellar Crusade	32.99	26.50	G.I.S.T	34.95	26.50
Firezone	24.99	16.50	Stir Crazy	19.99	13.50	Graphic Sheet	59.99	45.50
Five Star Compendium	24.99	16.50	ST Olympiad	9.99	7.50	G.S.G.C. Compiler	24.95	17.50
Flight Sim II	39.99	26.50	STOS	29.99	19.50	Hi Soft Basic	79.95	60.50
Flintstones	19.99	13.50	Street Fighter	19.99	16.00	K Data	49.99	32.50
Flying Shark	19.95	13.50	Street Gang	14.99	10.50	K Graph II	49.99	32.50
Football Manager 2	19.99	13.50	Strio Poker II	14.99	10.50	K Minstrel	29.95	21.50
Formula One	19.95	13.50	Summer Olympiad	19.99	13.50	K Rogel	49.99	32.50
Fernandez Must Die	24.99	16.50	Super Hang-On	19.99	13.50	K Word II	59.95	45.50
Fright Night	19.95	13.50	Super Sprint	14.99	10.50	K Sega	49.95	32.50
Fusion	24.95	19.50	Space Ace	19.99	13.50	K Occam	59.99	45.50
Galdregon's Domain	19.99	16.50	Soccer Supremo	14.99	10.50	Lattice G V.3	89.95	72.50
Gambler	14.95	10.50	Staff	19.99	13.50	Lisp	89.95	69.50
Games Winter Edition	19.95	13.50	Star Fleet	24.99	17.50	Macro Assembler	24.99	17.50
Garrison	24.95	16.50	Sinbad & Throne II Falcons	24.99	16.50	Modula II Developer	149.95	110.50
Gunship	24.99	16.50	SpeedBali	24.99	16.50	Modula II Standard	99.95	72.50
Get Dexter	19.99	13.50	Superman	24.99	16.50	Music Studio	24.99	21.50
Gauntlet II	24.99	19.50	ST Karate	19.99	13.50	M.C.C. Pascal	89.99	69.50
Gary Lineker Super Skills	19.99	13.50	Skrut	24.99	16.50	Paintworks	34.95	26.50
Gold Runner II	19.99	13.50	Tanglewood	19.99	13.50	Pascal	89.95	62.50
Garfield	19.99	13.50	Tetris	19.99	13.50	Power Basics	39.99	26.50
Hardball	24.99	16.50	Three Stooges	24.99	16.50	Publishing Partner	159.99	115.50
Hollywood Poker	14.99	10.50	Thrust	9.99	7.50	Sage Accountant	171.95	150.50
Hellfire Attack	24.99	17.50	Tracker	24.99	16.50	Sage Accountant Plus	228.85	175.50
Helter Skelter	14.99	10.50	Turbo Cup	9.99	7.50	Sage Bookkeeper	113.99	85.50
Heroes of the Lance	24.99	19.50	T					

CIIK

WE ACCEPT
EXPRESS
VOUCHERS

AMIGA SPECIALISTS

Unit 1, Willowsea Farm, Spout Lane North, Stanwell Moor, Staines, Middx. TW19 6BW
Telephone: (0753) 682988

SOFTWARE LIST

TITLE	S.S.P.	OUR PRICE
20,000 Leagues Under the Sea	19.99	13.50
4 x 4 Off Road Racing	24.99	13.50
Action Service	19.99	13.50
Advanced Ski Simulator	19.99	13.50
Adventure Con Set	29.99	20.50
Alien Syndrome	24.99	16.50
Alternate Reality	19.99	13.50
Annals of Rome	24.99	16.50
Archon Collection	24.99	17.50
ArkanoID II	24.99	16.50
Armageddon Man	19.99	14.50
Army Moves	24.99	16.50
Around The World in 80 Days	19.99	13.50
Arctic Fox	24.99	17.50
Atax	14.99	10.25
Autoduel	24.99	16.50
Baaf	19.99	13.50
Balance of Power	29.99	19.50
Barbarian	24.99	16.50
Bards Tale I	24.99	17.50
Bards Tale II	24.99	17.50
Basket Ball	24.99	19.50
Batman	24.99	16.50
Battle Chess	24.99	17.50
Bermuda Project	24.99	16.50
Better Dead Than Alien	19.99	13.50
Beyond The Ice Palace	24.99	16.50
Billiards (French Style)	19.99	13.50
Bomb Jack	24.99	16.50
Bombuzal	24.99	16.50
Bubble GhosI	19.99	13.50
California Games	19.99	16.00
Capone	29.99	19.50
Captain Blood	24.99	16.50
Captain Fizz & The Blaster Trans	19.99	13.50
Carmer Command	24.99	16.50
Chessmaster 2000	24.99	17.50
ChronoQuest	29.99	19.50
Chukie Egg	19.99	13.50
Circus Games	24.99	16.50
Computer Hits II : Featuring Joe Blade	Golden Path Black	
Shadow, Tetris	19.99	13.50
Corruption	24.99	16.50
Cosmic Bouncer	19.99	13.50
Crescent Barrel	24.99	16.50
Cybernoid	19.99	13.50
Dalek Thompson	24.99	16.50
Defector	19.99	13.50
Deja Vu	29.99	19.50
Destroyer	24.99	16.50
Double Dragon	19.99	13.50
Dragon's Lair	44.95	35.00
Drillen	24.99	16.50
Dungeon Master II (Meg only)	24.99	16.50
Earl Weaver Baseball	24.99	17.50
ECO	24.99	16.50
Eliminator	19.99	13.50
Eltie	24.99	16.50
Emanuelle	19.99	13.50
Emerald Mines	19.99	13.50
Empire	24.99	17.50
Empire Strikes Back	19.99	13.50
Enlightenment	19.99	13.50
Espionage	19.99	13.50
Excalibur	19.99	13.50
Faery Tale Adventure	49.99	26.50
Falcon F-16	29.99	19.50
Fernandez Must Die	24.99	18.50
Ferrari Formula One (12 kickstart only)	24.99	17.50
Final Assault	19.99	16.00
Firezone	24.99	16.50
Fish	24.99	18.50
Flight Sim II	39.99	26.50
Football Director II	19.99	13.50
Football Manager II	19.99	13.50
Forthand Inches	19.99	16.00
Fusion	24.99	17.50
Galactic Conqueror	24.99	16.50
Galdrgon's Domain	19.99	13.50
Ganymede	9.99	1.00
Garfield	24.99	16.50
Gauntlet II	24.99	19.50
Gettysberg		
Giganoid	14.99	10.25
Growth	14.99	10.25
Hellbent	19.99	14.50
Helltaskeller	14.99	10.25
Heroes of the Lance (12 kickstart only)	24.99	19.50
Highway Hawks	19.99	13.50
Hostages	24.99	16.50
Hotshot	24.99	16.50
IK+	24.99	16.50
Ikar Warriors	24.99	16.50
Impossible Mission II	19.99	16.00
Incredible Shrinking Sphere	24.99	16.50
Ingrids Back	19.99	13.50
International Soccer	19.99	13.50
Interceptor	24.99	17.50
Jet	39.99	26.50
Joan of Arc	24.99	16.50
Joe Blade II (Inc. Joe Blade II)	19.99	13.50
Kampfgruppe		
Kennedy Approach	24.99	16.50
King of Chicago	29.99	19.50
Lancelot	19.99	13.50
Leatherneck	19.99	13.50
Legend of the Sword	24.99	16.50
Leisure Suit Larry	24.99	16.50
Major Motion	19.99	13.50
Marble Madness	19.99	14.50
Mean 18	24.99	17.50
Mega Pack (incl. Seconds Out, Mousetrap, Suicide Mission, Phatos, Winter Olympiad)		
Frost Byte	24.99	16.50
Menace	19.99	13.50
Mouse Mouse	19.99	13.50
Mini Golf	19.99	13.50
Mortville Manor		
Motor Massacre	19.99	13.50
Nebulas	19.99	13.50
NetherWorld	19.99	13.50
Nigel Mansell Grand Prix	24.99	17.50
No Excuses	19.99	13.50
Obliterator	24.99	16.50
Off Shore Warrior	24.99	16.50
Operation Wolf	24.99	16.50
Out Run	19.99	14.50
Pac Mania	19.99	13.50
Pandora	19.99	13.50
Phantom Fighter	19.99	13.50
Pioneer Plague	24.99	16.50
Platoon	24.99	16.50
Phone for availability		
Amiga Gold Hits (Feat. Jinks, Rolling Thunder, Bionic Commandos, Leaderboard, Ballistics, Question of Sport, Custodian, Goldrunner II, Kenny Dalglish, Tiger Road, Goldrunner II Data Disc One, Goldrunner II Data Disc Two, D.N.A. Warrior, Realm of the Trolls, Denans, Prison, Willow, Afterburner, Kenny Dalglish Soccer Manager, Police Quest, Jug, Blasteroids, War 'n' Middle Earth, Zak McKracken, Slipstream, Crazy Cars II, Steve Davis World Snooker, Last Duel, Pacland, R-Type, Titan, Krystal, Football Manager II Expansion Disc)	12.99	10.25

TITLE

TITLE	S.S.P.	OUR PRICE
Ports Call	39.99	15.50
Powerplay	19.99	13.50
President is Missing	24.99	16.50
Purple Saturn Day	24.99	16.50
Quadrailien	24.99	16.50
Quantox	14.99	10.25
Questor II	24.99	19.50
R.A.C. Lombard Rally	24.99	16.50
Reach for the Stars	24.99	17.50
Red October	24.99	16.50
Return of the Jedi	19.99	13.50
Return to Atlantis	24.99	17.50
Return to Genesis	19.99	13.50
Rocket Ranger	24.99	19.50
Roger Rabbit	24.99	16.50
Rolling Thunder	24.99	19.50
Romantic Encounters	24.99	16.50
S.D.I.	24.99	19.50
Rock Challenge	24.99	16.50
Sargon III	19.99	13.50
Scary Mutant Space Aliens from Mars	24.99	16.50
Scenery Disc 7	19.99	13.50
Scenery Disc 11	19.99	13.50
Scenery Disc Europe	19.99	13.50
Scenery Disc Japan	19.99	13.50
Sentinel	19.99	13.50
ShadowGate	24.99	16.50
Sidearms	19.99	16.00
SideWinder	9.99	7.00
Space Disc		
Star Glider 2	24.99	16.50
Star Wars	19.99	13.50
StarFleet 1	24.99	17.50
Street Gang	14.99	10.25
Street Fighter	24.99	19.50
SpeedBall	24.99	16.50
Spidertronics	19.99	13.50
Star Glider 2	24.99	16.50
Star Wars	19.99	13.50
Star Fleet 1	24.99	17.50
Street Gang	14.99	10.25
Street Fighter	24.99	19.50
Strip Poker	14.99	10.25
Strip Poker Data Disc 1	9.99	7.00
Strike Force Hammer	24.99	16.50
Summer Olympiad	19.99	13.50
Super Hang On	24.99	16.50
Super Sir (Featuring Gnd Start, Thai Boxing, Karting Grand Prix, XR 35 Las Vegas, Flight Path 737)	16.50	
Superman	24.99	19.50
Sword of Sodan	29.99	19.50
TechnoCop	19.99	16.00
Teenage Queen	19.99	13.50
Terrapods	24.99	16.50
Test Drive	24.99	17.50
Tetraquest	19.99	13.50
Theaxter	24.99	16.50
Three Stooges	29.99	19.50
Thunder Blade	24.99	19.50
Time & Magik	19.99	13.50
Time Bandits	19.99	13.50
Track Suit Manager	19.99	13.50
Tracker	24.99	16.50
Tnad	29.99	19.50
Trivial Pursuit (New Beginning)	19.99	13.50
Turbo Cup	19.99	13.50
Turbo Trax	19.99	13.50
T.V. Sports Football	29.99	19.50
U.M.S.	24.99	16.50
Ultima III	24.99	16.50
Ultima IV	24.99	16.50
Uninvited	29.99	19.50
Vectorball	24.99	16.50
Victory Road	19.99	13.50
Virus	19.99	13.50
Wanted	19.99	13.50
Warlocks Quest	19.99	13.50
Way of the Little Dragon	14.99	10.25
Whirling...	19.99	13.50
Wizard Warz	24.99	16.50
Wizzball	24.99	

EXPRESS Classifieds

AMSTRAD PC1640 ECD dual drive plus printer and desk £400 of software inc. WP and spreadsheet etc. manuals and boxes £1200ono. Tel: 021 770 3772

FOR SALE. Atari 520STFM + external D/S disk drive + 35 games £300. Call 01 541 0741 after 5pm

COMMODORE 64, Data Cassette. Carry case, plus £250+ of S/W £150 Phone 01 4647

PHOTON PAINT to swap for Fantavision or other art/animation package Tel: 08832 4988 Paul

COMMODORE PC1 with extra drive, monochrome monitor, software - MSDOS 3.2, ABLE1. 9 month old. All for £300. Contact Tel: 01 7495350 after 6pm

SALE: IMR Scanner for Atari ST (cost £90) £65 inch. Postage or swaps. Phone Gosport 522737

FOR SALE CPC6128 colour monitor. Disks Op-wolf, Driller, Ikar, Blood. Many tapes. Worth £900 sell £400. Phone Mark (0977) 515109

ATARI 520STFM, boxed, mint condition with latest software (worth £500+) and accessories £300 (061) 330 0571 (Manchester)

COMMODORE 64, Dataset, Cabinet, joystick few games manual Tel 061 795 3776 £89 ask for Paul Thompson.

CANON PJ-1080A colour ink jet printer for ST/Amiga. £350 obo. Also digiview digitizer with camera, stand, lights £300. Phone 01 452 5382 (Flat 2)

BBCB+ FOR SALE £400 obo complete wth DFS, 40-80 disk drive, green monitor, monitor, software, and ROM add ons VGC. Southampton 636588

AMIGA FALCON, Sword of Sodan and all leads and manuals. 3 months old as new £329 Tel 0630 57129

SINCLAIR SPECTRUM 48K+ with datacorder, manual, Comco joystick interface. Over £100 games all for £70. Phone 0352 3920

1ST WORD plus with 1st mail V3.1 £50 for Atari ST Tel 09277 66636 evenings

WANTED AMSTRAD PC 1640 DD with printer and colour monitor phone 06286 63377

ATARI ST GAMES: Lombard RAC Rally £9.50. Starglider, Jinxter £7.50, others £7 to £3. All originals. Tel: 01 868 6628

C128 DISK drive, printer, freeze frame and £1200 software. All worth £2050 sell for £600. Phone Mark on 0721 38790

YAMAHA PSR60 Midi keyboard built-in sequencer and drum kit. 14 months old. £325. Amiga software all originals from £6. Tel: 0733 238912

FOR SALE: originals: President is missing £10 and FOFT £12 on ST Excellent condition. Phone Kenneth after 6pm 031 339 1758

COMMODORE MPS - 803 Printer as new plus WP paper, labels bargain £85. Tel: John on 061 790 0655

UPGRADED TO PCWP and selling Sinclair 128+/- as new - first come first sold basis - no gimmicks. Ring 01 854 1509 7-8pm Mick

AM SEEKING extra memory RAM/Eproms for Cambridge 288 any other Ad-ons also considered. phone (0925) 51 5316 reasonably priced please

C128, COLOUR monitor, disk drive, printer, loads of games including imports excellent condition boxed cost £1000+ offers to 0600 6366 on telephone

QL(JSI), TRUMP CARD, 3.5" disk drive, Philips monitor, Brother M1004 printer, joystick, software, books, mags. Price = £390 (ono) Tel: 0727 73410

ATARI 520STFM (1.2 meg), joystick, 100 disks, disk box, about 16 months old. £300 obo Tel: 0942 818088 evenings

DOZENS OF Amiga PD progs for sale. SAE Ray Burt - Frost 169 Dale Valley Road, Hollybrook, Southampton 785680

SPECTRUM PLUS 48K plus all extras cassette etc and over seventy games worth over £500 sell the lot for £85. Tel: 01 350 0736

AMSTRAD 464, +50 games colour monitor - just over excellent condition. Good reason for asking £150. Tyne and Wear 584 7104

WANTED DEMOS for C64, on tape. Pay £1 for 5. Spectrum keyboard wanted £10. 34, Berkeley Road East, Hay Mills, Birmingham, B25 8NP England

MIDI MUSICIANS look! Aka 12 bit polyphonic sampler, 3.5" d/drive boxed, 10 disks.

£1000.00 or swap for Amiga plus caset. Tel: 0663 43388
BBC B 40/80 DSDD, joysticks, 32k sideways Romex board, hundreds of games utilities for printer Romix, Interword Wordws + Discdoc etc £300.00 ONO

COMMODORE 64C save worth £870 soft/hardware including datasets, brother printer, music maker II, speech synthesizer three joysticks etc. £200. Tel: 0748 75559

FREE! MONTHLY Atari ST disk magazine send sae and blank disk to David Dean, 1 Ator Grove, Newport, Shropshire, TF10 7JF. Tel: 0952 820215

AMSTRAD CPC6128 green monitor, Panasonic printer, Silicon disk, software, books, magazines - cost £950 sell £420 Tel: Belfast 0232 752297

AMIGA SOFTWARE, Menace, Aaargh!, Virus, Ferrari, Formula One, Operator, Wolf, £70 No offers. No splitting. Tel: 01 202 7068 evenings only

FOR SALE computer magazine personal computer news 1983 - 85 as bound 82 copies £15. Tel: 01 204 3918

ANY PROGRAMS or routines you want programmed for your C64 send details & what you want and I'll program them. Tel: 0306 46582

QL INTERNATIONAL cricket £1.99, 128K and 256K versions. Big animated sprites, 2 player option. Telephone Nigel Holder on 0706 39554

BRIGHT PICTURE with your ST. HU11. 56 set up? For free help sheet please send SAE to Parker, 14 Cross Lanes, Pit, Bristol BS7581 5242

AMSTRAD CPC disk software - Basic C £15, Gemini Office Master £8, Database Plant (personal accounts). Tel: George 0924 822778

64C NEW still boxed. 1541C disk drive, Brother HR5 printer, numerous disks, games, cartridges, bargain £250. Phone 01 883 3218

ATARI ST - Ocean's where time stood still, original game, only £10. Contact Ian West (0492) 641203 between 5pm-9pm ask for Emrys

MEGA AMIGA owner wishes to contact those in England to exchange 1ps graphics etc. Please call Dave on 01 467 7578

HAVE YOU completed a programming masterpiece? If so send your finished games to: P. Dowrey, Fairbanks, School Lane, Great Leighs, Chelmsford, Essex, CM3 1NX (0245) 361 471

AMSTRAD 6128 Tasman software complete range £10 each. Mini office II £10. Stop press mouse disks. £50 Tel: 0477 35105

WORTHWHILE, INTERESTING job wanted for talented computer graphics art & experienced in video and presentation. Call Chris (evenings) 01 431 4633

SEGA GAMES, ■ Type, Shinobi ThunderBlade, Outrun £15 or less. Send SAE to R Elizabeth, 91 Stowford Park, SE23 1LDD London

FOR SALE Atari 520 STFM 1 meg drive 112 disk games and utilities £250 - no offers. Phone 0689 44034 Croydon

COMMODORE 64 tape unit 2 joysticks over £520. Software bargain £200 Tel: 01 643 6002 after 6pm

AMIGA SOFTWARE Virus £10, Eliminator £10, SideWinder £5, KOC £15, MCC Pascal, £45. Phone 01 863 5362

BARGAIN! NEWLY boxed Nintendo with joy pads, robot, phaser gun, three games. PLUSS" excellent sampling keyboard ONLY £199 contact Kim (0115) 9 3201

C64C, DATASSETTE, sound expander and software. Two & a half months old and still in boxes. Must sell. £150 obo. Tel: 061 773 9034 After 6pm

Z88 PORTABLE computer, 128K cartridge, PLUSS" Power pack, Case. As new the lot only £150. Phone Simon 0532 842780

Classified information

Want to sell your hardware or original software?

Upgraded recently and no longer need some products?

Want to publicise your user group?

Need to promote your bulletin board?

Then New Computer Express classified ads section is simply the best place

For a strictly limited period, adverts up to 20 words will be FREE. Yes, that's right, also 20% free! But watch out - we'll soon be introducing a nominal charge for your classified ads.

Send off the form today and your ad will appear in the next available issue of New Computer Express.

Express 23 Classifieds form

Name

Address

Tel.

Please note:

- 1 New Computer Express will not accept responsibility for any minor typographical errors which do not materially affect the meaning of the adverts.
- 2 We cannot vouch for the quality of goods and/or services advertised in this section. All ads are accepted in good faith.
- 3 We reserve the right to amend or even refuse ads at our discretion.
- 4 No pirated software may be sold through these columns. Any readers being offered non-originals should contact us.
- 5 We cannot guarantee that adverts will appear in a specific issue of New Computer Express.
- 6 The following declaration must be signed:

I have read and understood the terms for the inclusion of my ad.

Signed

This free offer is valid only until 1st May 1989

One space equals one word. For the free introductory offer, all adverts must be no longer than 20 words.

● Domark's back with a vengeance this week, with two solid releases - *Typhoon Thompson* and *Vindicators*. *Sanxion* from Thalamus wasn't that bad either.

The rest had us running for cover and, in the case of *Arnhem*, - the dustbin. Nice one Fieldy!

VINDICATORS

TENGEN/DOMARK

ST £19.99d

Also on Spectrum, CPC

Out soon on C64, Amiga



• Tanks for the memory

Vindicators is the first coin-op conversion on the Tengen/Domark label, so does it justify purchase?

● GAMEPLAY

All tanked up, with everything to blow! You're in control of your SR-88 Battle Tank and must destroy the control centres of 14 alien space stations. Along the way you'll have to avoid tanks, cannons and force fields in your thirst for total annihilation.

You "can get a little Xtra help" by collecting Battle Stars during the game, and trading them for extra weaponry and powers at the end of each stage.

● GRAPHICS AND SOUND

Although the backdrops and sprites have been well converted, this has been negated by jerky scrolling and sluggish movement. Audio consists of a thumpy, throbby sampled soundtrack on the title page, plus the standard offering of sound spot-effects in-game.

● OTHER VERSIONS

We've only seen pre-production demos of the other versions of *Vindicators*, but they looked much the same as the ST version - let's hope their speed is a little faster.

● EXPRESS VERDICT

Vindicators is visually faithful to its Atari coin-op parent, but its lack of fast-paced action lets the gameplay down badly. However, for twenty sovs it's worth a quick butchers, guy - especially if you developed peak-level neural/sensory enjoyment when jacking into the coin-op.



Rik Haynes



• Life on the ocean wave (ripple)



• Cute - but weird

TYPHOOON THOMPSON

DOMARK

£19.99d

Other versions planned

Typhoon comes from Dan Gorlin, the man who brought you the 8-bit hit *Choplifter* back in '82. Mastered on an Apple 2, this Teheran Embassy Siege simulator actually found its way onto coin-ops! *Typhoon* looks like it might attract a captive audience too.

● GAMEPLAY

File under Wacko. Piloting an amphibious jet-sled across an ocean world, your quest is to locate several tools to free a baby from its Sea Sprite guardians. You visit clusters of islands where you must fire a range of weapons to release the sprites from a diverse range of defences.

After collection you deliver them to a Treasury Dome and pick up a tool. You then progress to another cluster after dropping off your prize to the Sprite Guardians, who give you new weapons in return.

Each level involves various chases around the island villages until all Sprites are collected and exchanged for the four artifacts needed to complete the mission. It all sounds pretty simple and easy, if not a little surreal, until you find yourself tracking literally dozens of Sprites that turn into flying fish if you don't collect

CUTE GRAPHICS

them in time. And of course there are various defences designed to make the quest more difficult. Their names - Bumpers, Whompers, Forcers, Suckers, Bubblers, Spitters and Zappers - should give you some idea of what to expect but you can dive under the surface when things get too hot.

So, we're talking straight shoot-em-up strategics but what pulls *Typhoon* out of the crowd is the graphics.

● GRAPHICS AND SOUND

Although *Typhoon Thompson*'s sprites are pretty minuscule this doesn't detract from the fabulous animation on view or the smooth eight-way scrolling. Combining these with detail, colour and speed injects gameplay with a freshness the scenario would appear to lack. End of level animated sequences are great, with frame speed fast enough to supply convincing cartoon action. Sound is somewhat disappointing, since spot-FX are uninspired.

● OTHER VERSIONS

Plans are a little sketchy for other format releases - it depends on how ST sales go.

● EXPRESS VERDICT

Cute is the word that comes to mind. Cute cut with an addictiveness that creeps up on you. *Typhoon Thompson*'s not going to have you rushing out to buy it until after the word gets round.



Andy Storer



Some three years after its parent arrived on the C64 comes Spectrum *Sanxion*. Has it been worth the wait?

● GAMEPLAY

Nothing original here, as you plough through hordes of alien sprite attack formations in this horizontally-scrolling shoot-em-up. To keep the interest going you can multi-view the action from above or sideways, depending on your preferred slant in life.

● GRAPHICS AND SOUND

Sprites and backdrops are highly-defined mono representations, which work well thanks to fast - but smooth - scrolling and animation. Audio isn't that bad, with identifiable renditions of the C64 soundtracks and reasonable - albeit scarce - sound spot-effects during play.

● OTHER VERSIONS

Sanxion was the first game by a Finnish

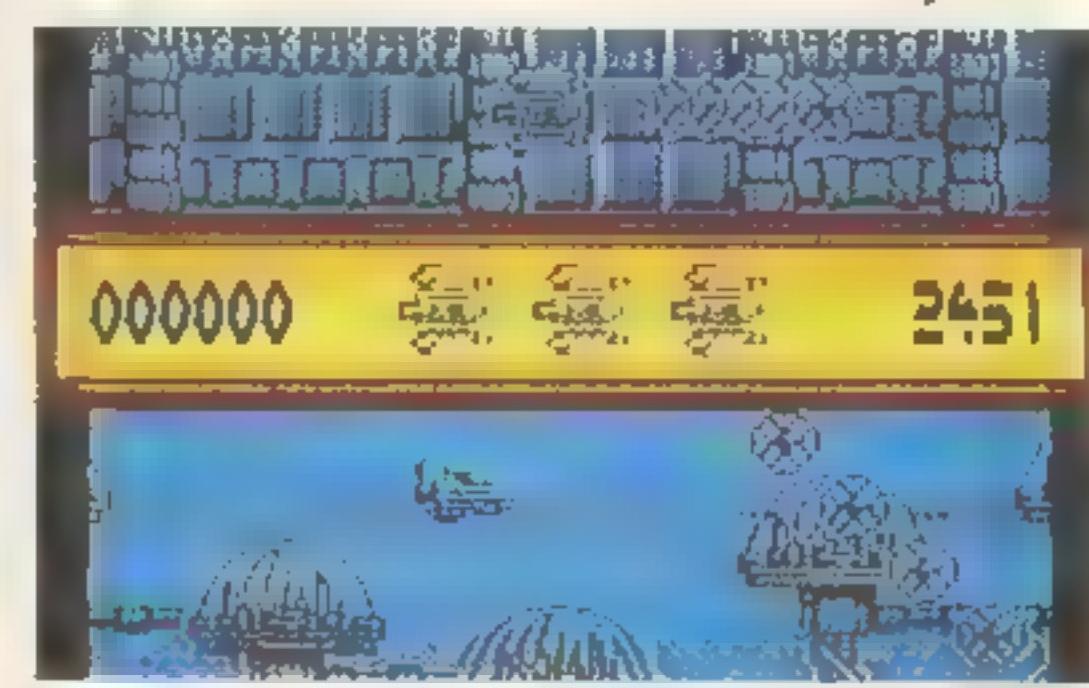
programmer, Stavros (innit, peeps) Fasoulas, who went on to produce *Delta* and *Quedex* until being drafted into national service. Containing smooth, fast and colourful visuals and a superb Rob Hubbard loading soundtrack, *Sanxion* can now be found on the Rack-It budget label for the bargain price of £3. With Spectrum owners having to wait three years for their version of *Sanxion*, who knows if or when there's going to be a CPC version? And definitely don't hold your breath for *Sanxion* on the MSX.

● EXPRESS VERDICT

Sanxion on the Spectrum is authentic to the C64 original, but suffers from being slightly too difficult to play. Of course, many seasoned Spectrum gamesters should be able to take up the challenge *Sanxion* provides...



Rik Haynes



• Seeing both sides on Level One

THE RUNNING MAN



You've read the Stephen King novel. You've seen the movie. Now you can play the computer game, thanks to the guys at Grandslam.



• About to go on air

● GAMEPLAY

You take on the sprite of Arnold Schwarzenegger in this futuristic TV game of epic rating proportions. Hunted by such freaks as Subzero, Buzzsaw and Dynamo you must travel the depths of the "Game Zone" looking for love, health and the odd weapon or two. After all, you can run but you can't hide!

● GRAPHICS AND SOUND

The Running Man contains one of the best intros we seen on any game, with an assortment of animations



• In the game: Suffering canine harassment in front of the TV cameras

screen looking like a road accident and a number of coloured blocks bearing symbols intended to convey to a jaded reviewer's mind the massed ranks of a tired but heroic army.

Gameplay? Well, during your turn, you issue orders to each coloured block, er, sorry, battalion until all your troops have been deployed. You hear a few squeaks and grunts whilst the computer playing the opposing side makes its moves and then it's back to you again, deploying hither and thither. And so it goes on - ad



• A map of the area, and no vegetables in sight yet

infinitum or until one side loses (it always feels like it's you who's lost).

● GRAPHICS AND SOUND

If the abstract works of Jackson Pollock turn you on, then you'll thrill to the main display. Lurid coloured blots reminiscent of a tropical disease are the order of the day.

Sound? A few grunts and whistles but nothing to write home to Ma about. OK, this is not meant to be a shoot-'em-up (not in the accepted sense anyway), but the odd victory march, or decent explosion would have helped to create atmosphere.

● OTHER VERSIONS

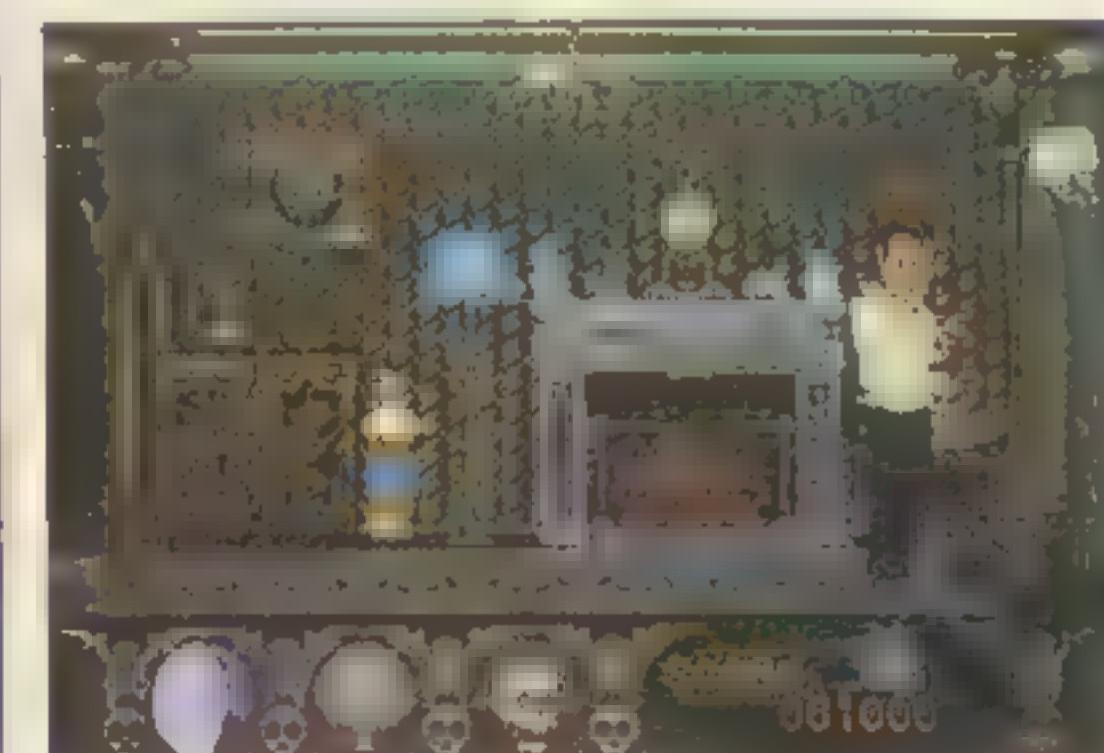
Already out on the Spectrum and CPC, with ST and Amiga versions to follow.

● EXPRESS VERDICT

Our copy made a satisfying clunk as it struck the dustbin. Remember, we get review copies for free - you'd have to pay for this junk - avoid it.



Field Marshal Mellish



• Nice audiovisuals, shame about the gameplay

Remember the film? Neither did we, but we thought we'd have a look at the game anyway. Because with gameplay by Master of the Scrolls Steve Bak and graphics by Pete Lyon you might be expecting something special. You'd be...er...

● GAMEPLAY

Using a joystick, you play the role of Jerry Dandridge, a modern day vampire who has twelve hours to bite the living daylights out of anything that moves. This involves wandering around the rooms of a mansion, dodging the crosses, garlic and holy water thrown by your intended victims before sinking your teeth into their jugulars. Sucking blood allows you to maintain your death-force long enough to survive until daylight. Clear a level and it's onto the next, where more rooms open up for you to explore. If you take too much time, your death-force dwindles rapidly and you eventually enter a state of non-existence. Game over.

● GRAPHICS AND SOUND

Both the visual and audio aspects of Fright Night are superb. The varied, colourful backdrops are expertly drawn and the accompanying music and spot-FX compound the sense of atmosphere well making full use of the Amiga's stereo sound capability.

● OTHER VERSIONS

An outing on the ST is due for imminent release but is as yet unseen.

● EXPRESS VERDICT

Although Fright Night looks and sounds great, its gameplay - and here you have to remember it's a game about biting into necks and drawing blood - sucks. There's simply not enough variation in play, other than more of the same, and even then what's there isn't terribly difficult. For a release delivering so much audio-visually, there's nothing here to get your teeth into.



Andy Storer

ARNHEM: THE MARKET GARDEN OPTION

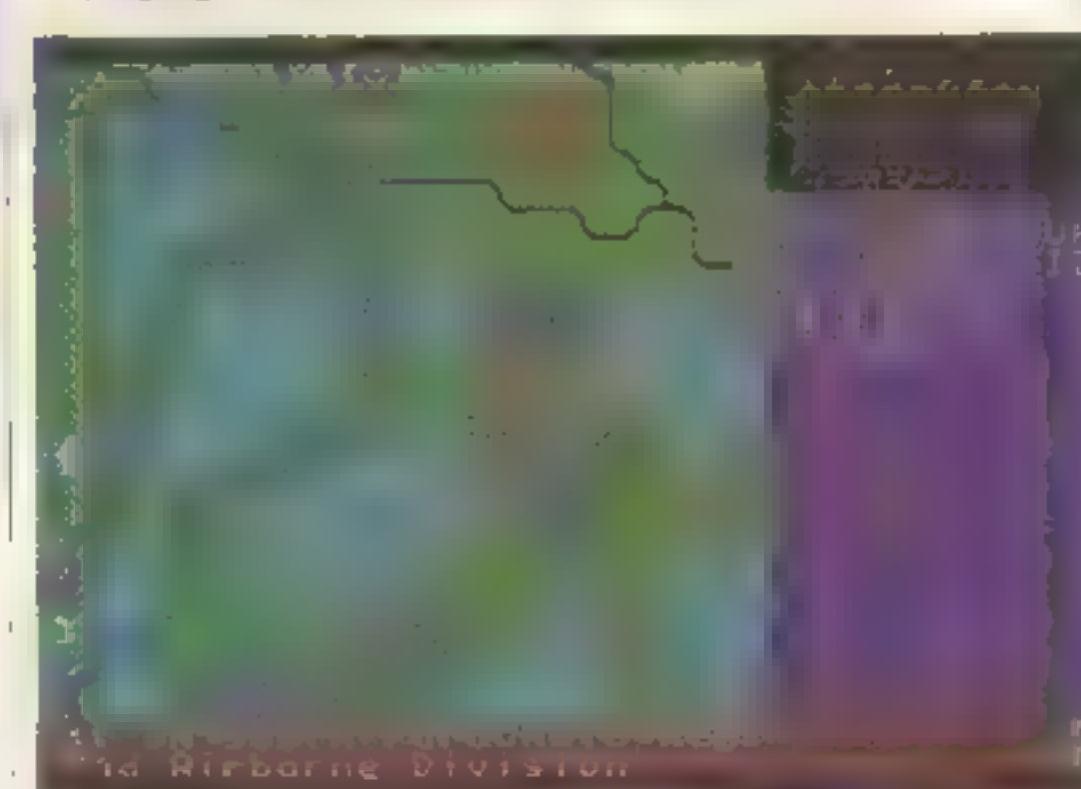


Tactical wargaming fans now get to refight one of World War II's more celebrated battles on their PC, courtesy of CCS.

● GAMEPLAY

The spiel on the package indicated that the hapless player would "experience...bitter conflict..." True - by trying to play this game!

You begin by choosing one of five possible scenarios: Advance to Eindhoven, Operation garden, Operation market, The bridge too far and Market garden. Typing in Advance to Eindhoven, for example, rewards you with a



• A map of the area, and no vegetables in sight yet

Money is everything!

BLOOD MONEY PSYGNOSIS

Programmed by the same team that brought us Menace comes Blood Money, - a shoot-'em-up featuring

over 1 Meg of graphics data and a 400K sampled soundtrack. Blood Money offers simultaneous two-player action, four alien safaris and the option to buy

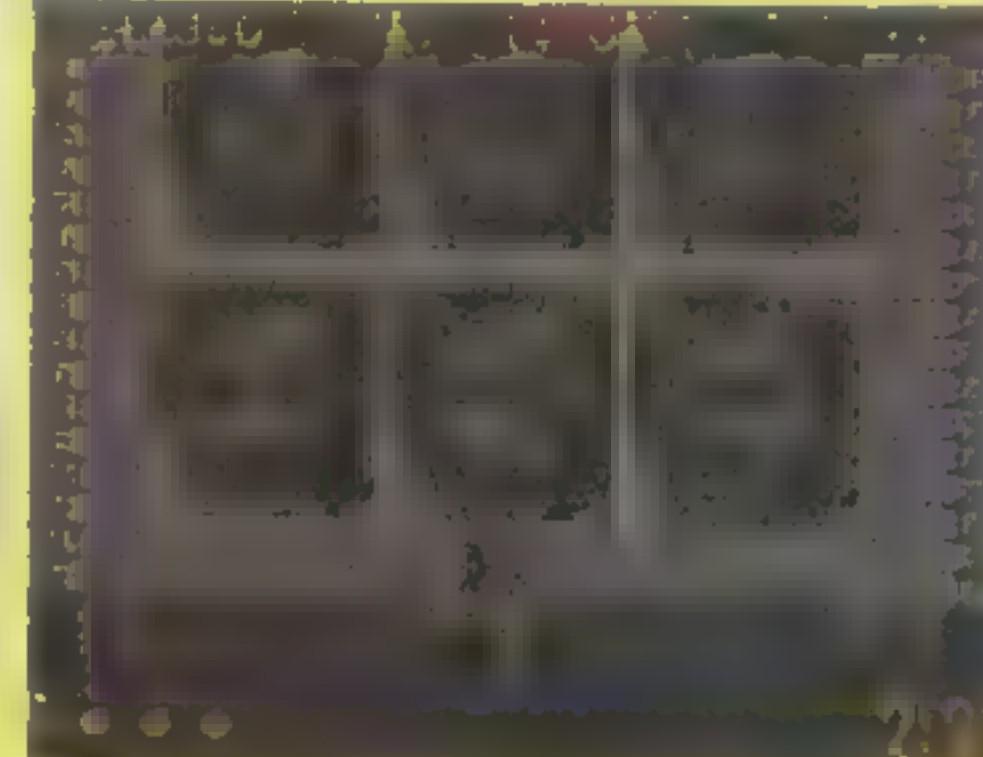
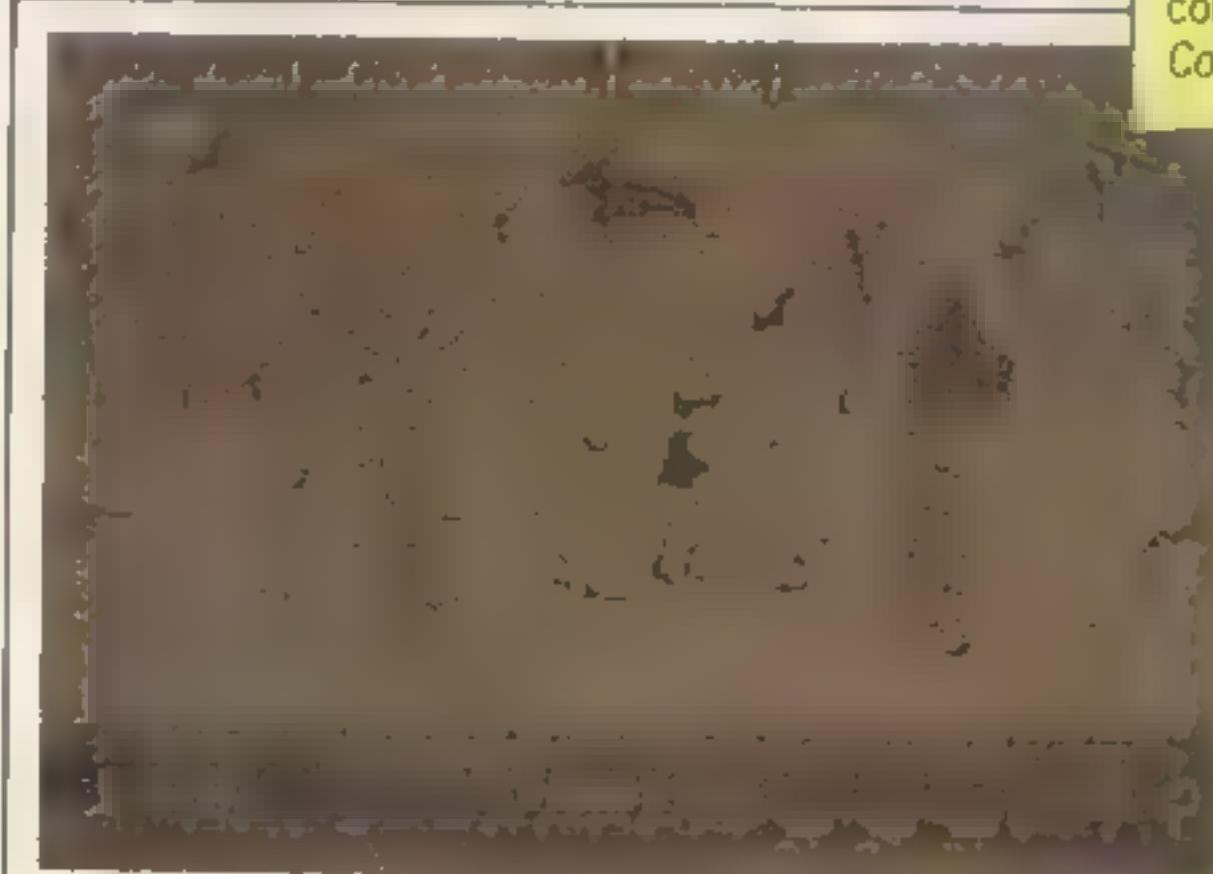
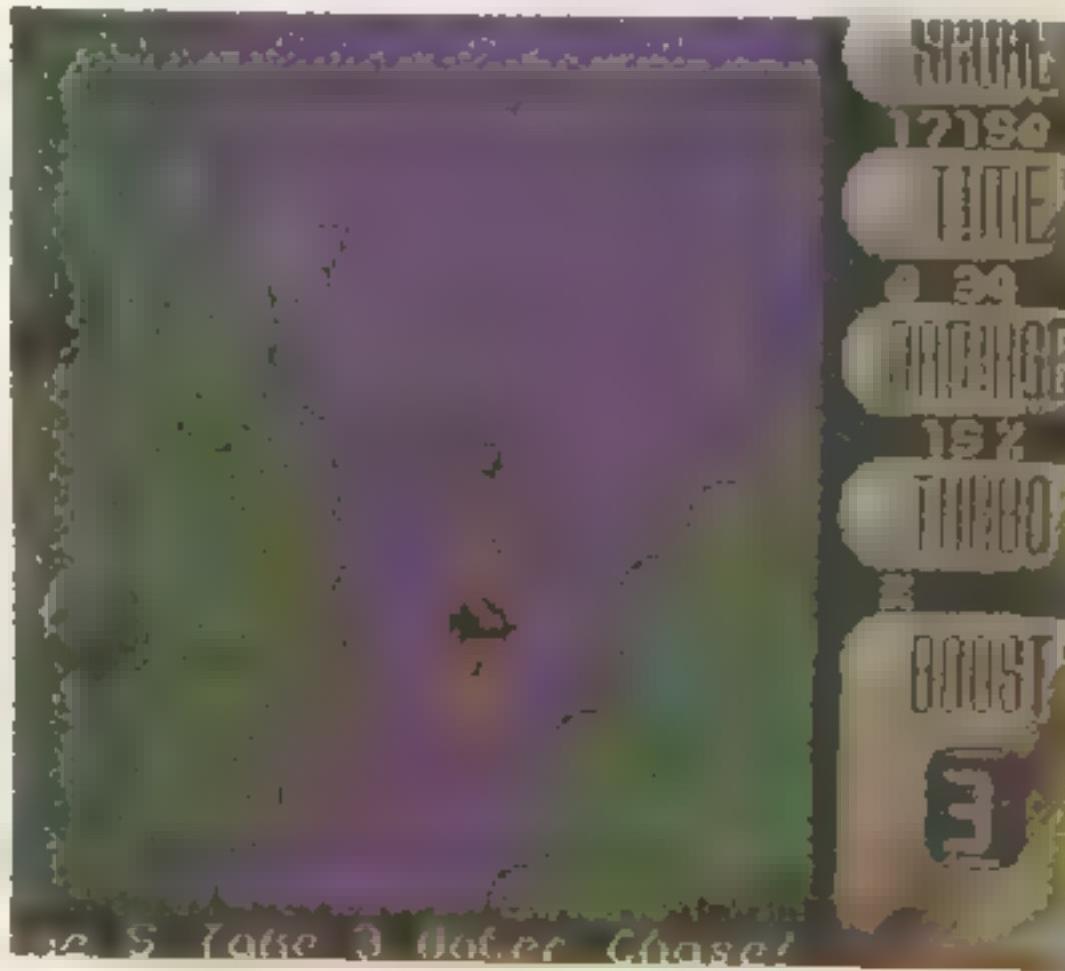
extra weaponry as you strategically blast everything in sight. Blood Money is out later this month at a rather hefty £30.



SUPER STUNTMAN

CODE MASTERS

Racing round the film-set ■ your Ferrari GTO, Powerboat or Turbo Chopper, you have to complete seven film stunts for a blockbuster movie in this, the latest epic release from Code Masters. Super Stuntman (simulator?) ■ out shortly on ST and Amiga.



SHINOBI MELBOURNE HOUSE

As a Ninja Master, you must take on The Ring of Five terrorist network, which has kidnapped the world leader's kids and stashed them away in five separate locations. Your success will depend on clever use of your shuriken, sword and nunchaku state-of-the-martial-arts weaponry - and the odd, well placed headbutt here or there. Out sometime on Spectrum, C64, CPC, ST, Amiga and PC, fans ■ Shinobi will have to feed their addiction to the game by either playing the coin-op, buying a Sega games console or watching the Depeche Mode Everything Counts '89-mix video!

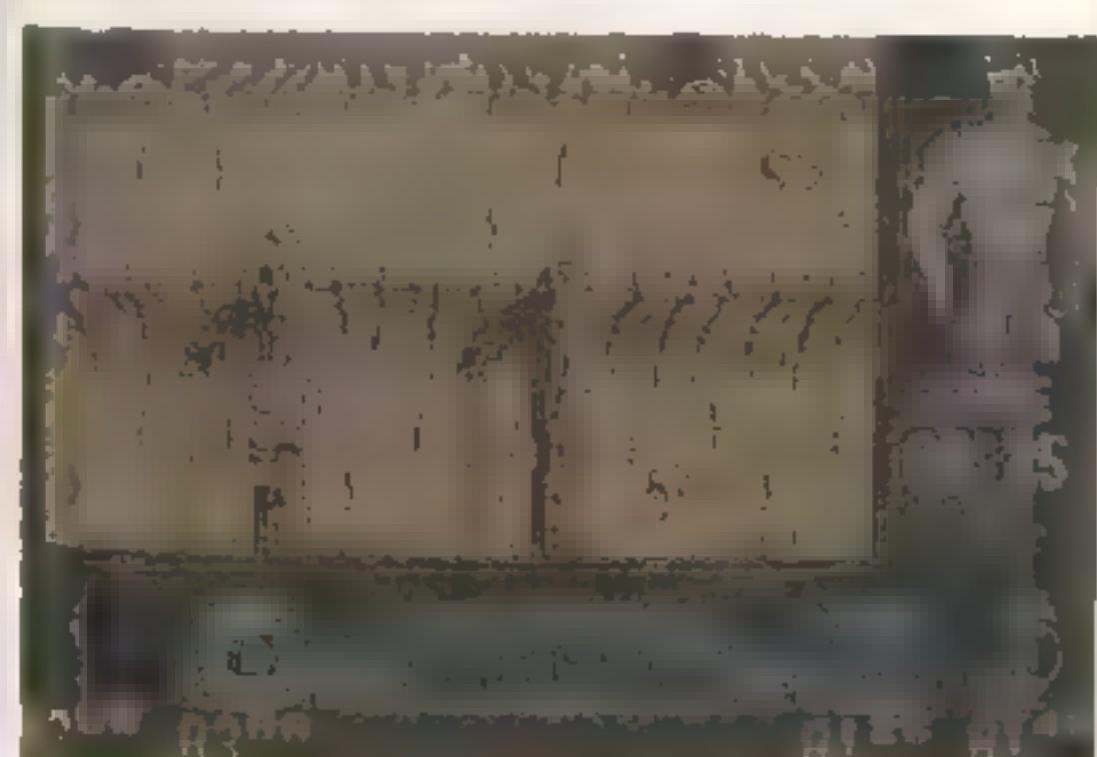
RENEGADE III

IMAGINE/OCEAN

Renegade ■ is the third (believe it or not) in a trilogy of martial arts kick-'em-ups, placing you in the aforementioned role of "Renegade". This time, you're up against a time-warp compilation of medieval, ancient Egyptian and prehistoric opposition in your never ceasing quest to get your girlie back from The Forces Of The Future. Already out on Spectrum, C64, CPC, with ST and Amiga versions to follow.

RUN THE GAUNTLET OCEAN

No, not another four-player maze game incarnation, Run the Gauntlet is a TV licensed game centred around the adventurous, but tiring, tasks of multi-machine assault courses. In-game hardware includes jetskis, hovers, speedboats, inflatables and buggies as you try to run down the inane commentator! Released on Spectrum, C64, CPC, ST and Amiga.



RINGSIDE EAS

Not enough boxing on the TV lately? Well Ringside could redress the balance when it's released shortly on the C64. As an eager young boxer itching for the World Title, you must train hard and play rough as you punch out ten contenders in this German boxing-sim.



ATARI ST and AMIGA

Sixteen Bit Superdeals from the Sixteen Bit Specialists!

CUSTOMERS PLEASE NOTE! When comparing prices remember ours include fast delivery by courier.

520 STFM Super Pack

£349.00

Inc VAT and Next Day Delivery

Super Pack includes:

- ★ 520STFM 512K Keyboard with Built-in 1 Megabyte disk drive and TV Modulator
- ★ £450 of games software including BUGGY BOY, TEST DRIVE, MARBLE MADNESS, WIZBALL and 17 more.
- ★ Organiser Business Software including WORDPROCESSOR, SPREADSHEET and DATABASE.
- ★ FREE JOYSTICK!
- ★ All leads, manuals PLUS MOUSE and free mains plug!

REMEMBER! Many ST's do not come with BASIC-ours come with ST BASIC REV D by Metacomco.

Also available with only one free game and no joystick or Organiser

£269.00 inc.

1040STFM Super Pack

£439.00

As above but with 1 meg 1040STFM

1040STFM Business Pack

£439.00

Business Pack Includes:

- ★ Atari 1040STFM Keyboard with 1 meg memory and 1 meg built-in disk drive plus TV modulator.
- ★ £360 worth of Business Software including MICROSOFT WRITE word processor (£150), SUPERBASE PERSONAL Database (£60) and VIP PROFESSIONAL Lotus 123 Spreadsheet clone (£150)
- ★ All leads, manuals and mouse

ACCESSORIES

Quickshot II Turbo Joystick	13.95	Branded Memorex 3.5" DS DD Disks
Competition Pro 5000 Joystick	13.95	Box of 10
Competition Pro with Autofire	14.95	Roll Top Disk box for 100
Konix SpeedKing Joystick	11.95	3.5" disks
Red Mouse Mat with Amiga logo...	6.95	Amiga A501 1 Meg Expansion ..
Plain blue Mouse Mat	5.45	139.99

PRINTERS

Star LC10 including interface lead for ST/Amiga	£229.00
Star LC10 colour including interface lead for St/Amiga.....	£259.00
Citizen 120D including interface lead for ST/Amiga.....	£159.00
SEIKOSHA 80 COLUMN PRINTERS - AMAZING PRICES	
Seikosha 9 pin NLQ	£139.00
Seikosha 24 pin LQ.....	£279.00

EXTERNAL DISK DRIVES

Atari SF314 1 Megabyte.....	£139.00
Amiga A1010 1 Megabyte	£139.00
Cumana 1 Megabyte Atari or Amiga	£99.95

Amiga A500 System 1

£365.00

Inc Vat and Next Day Delivery

System 1 includes:

- ★ Amiga A500 512K Keyboard with Built-in 1 Megabyte disk drive.
- ★ Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV.
- ★ Amiga BASIC, Amiga EXTRAS, Workbench PLUS the Amiga Step by step Tutorial.
- ★ All leads, manuals PLUS MOUSE and mains plug!

Amiga A500 System 2

£385.00

★ Amiga A500 System 1 PLUS £230.00 worth of software comprising 10 games

Amiga A500 System 3

£395.00

★ Amiga A500 System 1 PLUS £285 worth of software comprising 8 games and PHOTON PAINT graphics package + Workbench 1.3.

Amiga A500 System 4

WITH 500 FREE AIR MILES!

£459.00

includes everything in our Amiga System 1 package PLUS SPRITZ Graphics Package, disk storage wallet for 25 disks, Who Framed Roger Rabbit, Nebulus, Starray PLUS 500 FREE AIR MILES, enough for a return trip to PARIS, AMSTERDAM OR BRUSSELS!

AMIGA 1 MEG!

£499.00

Announcing the new Amiga 1 meg-an A500 system 1 with fitted 1 megabyte memory expansion and clock card PLUS TV Modulator AND DRAGON'S LAIR a six disk 1 meg megagame!

AMIGA 1 MEG+

£519.00

Our Amiga 1 meg + also includes the £230 worth of games software normally given with our A500 System 2 Games Pack.

MONITORS

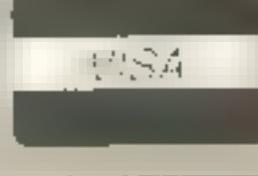
Commodore Amiga A1084 Stereo colour monitor inc lead	£269.00
Atari SC1224 Colour Monitor inc lead.....	£259.00
Atari SM124 Mono Monitor including lead	£104.00
Philips CM8833 stereo colour monitor incl lead for ST or Amiga	£249.00

CREDIT CARD ORDERLINE 0908 78008 (Mon-Sat 9am - 6pm)

We've moved to larger premises - Callers most welcome!

DIGICOM

Unit 36, Wharfside, Fenny Stratford, MILTON KEYNES MK2 2AZ
All prices include VAT and delivery by courier



The
incredible
New
Computer
Express
voucher
scheme can
save you

£10

when you buy
from adverts
in this
magazine!



EXPRESS
VOUCHER



EXPRESS
VOUCHER



EXPRESS
VOUCHER



£1 voucher. Valid for orders above £20

This voucher may be used as £1.00 part payment on any order totalling over £20 from a participating advertiser in *New Computer Express*. You simply fill in the details below and send it off with your order.

our name _____

ddress _____

telephone (if possible) _____

em (s) purchased _____

Only one voucher per order is allowed. This voucher and its accompanying order must be received by the advertiser before 9am **April 24, 1989**.

£2 voucher. Valid for orders above £40

This voucher may be used as £2.00 part payment on any order totalling over £40 from a participating advertiser in *New Computer Express*. You simply fill in the details below and send it off with your order.

our name _____

ddress _____

telephone (if possible) _____

em (s) purchased _____

Only one voucher per order is allowed. This voucher and its accompanying order must be received by the advertiser before 9am **April 24, 1989**.

£3 voucher. Valid for orders above £60

This voucher may be used as £3.00 part payment on any order totalling over £60 from a participating advertiser in *New Computer Express*. You simply fill in the details below and send it off with your order.

our name _____

ddress _____

telephone (if possible) _____

em (s) purchased _____

Only one voucher per order is allowed. This voucher and its accompanying order must be received by the advertiser before 9am **April 24, 1989**.

£4 voucher. Valid for orders above £80

This voucher may be used as £4.00 part payment on any order totalling over £80 from a participating advertiser in *New Computer Express*. You simply fill in the details below and send it off with your order.

our name _____

ddress _____

telephone (if possible) _____

em (s) purchased _____

Only one voucher per order is allowed. This voucher and its accompanying order must be received by the advertiser before 9am **April 24, 1989**.

EXPRESS VOUCHERS

How the scheme works

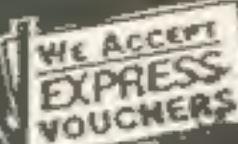
- The Express voucher is a special scheme to encourage you to buy *New Computer Express* regularly.
- It offers you savings of up to £10 when you buy goods through the magazine.
- The vouchers are not limited to specific items – you can save on any purchase from one of the participating advertisers.
- Most mail order advertisers in this magazine are taking part in the scheme – just look for this sign. →



- Remember. The use of just one voucher could more than recoup the price of the magazine.

THE FIVE SIMPLE RULES

1. Express vouchers can be used to obtain discounts on purchases of goods advertised in this issue of *New Computer Express*, provided that they are bought directly from an advertiser taking part in the scheme. The vouchers are valid only for those advertisements which say "We Accept Express Vouchers".
2. Each voucher entitles you to a discount at the voucher's face value, provided that your overall order level is higher than the figure indicated on the back of the voucher.
3. To use a voucher, simply enclose it with your discounted payment when you order. You may use only one voucher in any one order.
4. The order including the voucher must be received by the advertiser before the closing date printed on the voucher.
5. You must fill in the details requested on the voucher.



K & M COMPUTERS



THE LEADING AMSTRAD MAIL ORDER SPECIALISTS
*** NEW LOWER PRICES ***

*** ADVENTURE * CASS DISC**

Time and Magik	£11.25	£11.25
Gnome II: Ingrids Back	£11.25	£14.75
Lancelot	£11.25	£14.75
Jinxter (6128)	£14.75	
Corruption (6128)	£14.75	
Return to Doom	£12.50	
Not A Penny More	£11.25	£14.75
Mindfighter	£11.25	£14.75

*** COMPILATIONS ***

The In Crowd	£11.25	
History In The Making	£15.95	£21.50
Taito Coin-Op (Inc. Rastan)	£9.90	
Supreme Challenge (Inc. Elite)	£9.90	£13.10
Gold, Silver & Bronze	£11.25	£21.50
Giants	£10.50	£15.95
Flight Ace	£11.25	£13.95
Arcade Muscle	£10.50	£Phone
Command Performance	£7.75	£15.95
Frank Brunos Big Box	£9.90	£13.10
We Are The Champions	£7.75	£13.10
Fists N Throttles	£9.90	£13.10
Supreme Challenge (Inc Elite)	£9.90	£13.10
Computer Hits 5	£9.90	£13.10
Game, Set & Match II	£9.90	£13.10
Space Ace	£10.50	£11.25

*** STRATEGY/SIMULATION ***

Football Manager II	£7.75	£11.25
F.ball Man. II Expansion Kit	£6.25	£7.25
Football Director II		£14.75
Gunship	£11.25	£14.75
Ancient Battles	£11.25	
Microprose Soccer	N	£11.25
Times Of Lore	N	£7.75
Chuck Yeagers Ad. Trainer	£7.75	£11.25
3D Pool	N	£7.75
Bards Tale	£7.75	£11.25
Question Of Sport	N	£11.25
Football Director (464)	£7.75	
Roy Of The Rovers	£7.75	£11.25
Risk	N	£7.75
War In Middle Earth	£7.75	£Phone
Heroes Of The Lance	£7.75	£15.90
Airborne Ranger	£11.25	£14.75
Trivial Pursuit (New Edition)	£11.25	£14.75
P.H.M. Pegasus	£7.75	£11.25
Track-Suit Manager	N	£7.75
Laser Squad	N	£7.75
4 Soccer Simulator	£7.75	£11.25
Archon Collection	£7.75	£11.25
Classic Games 4	£7.75	£11.25
Night Raider	£7.75	£11.25

*** EDUCATIONAL ***

Answer Back Jnr.	£7.95	£11.95
Factfile 500s	£3.75	£6.75
Fun School (U5s, 5-8, 8-12)	£5.50	£7.95
Maxi Maths (Geometry)	£8.50	£13.95
The Three Bears (6128)	£15.95	
Giant Killer (9-14)	£12.95	
Magic Maths (4-8)	£8.50	£12.95
Maths Mania (8-12)	£8.50	£12.95
Chemistry GCSE	£11.90	£14.95
Physics GCSE	£11.90	£14.95
Biology I (12-16)	£8.50	£12.95
Wordhang	£7.50	£11.95
Happy Writing	£7.50	£11.95
Physics I (12-16)	£8.50	£13.95
Mapwork Geography Quiz	£8.50	£13.95
Spanish Tutor	£12.95	£15.95
French Mistress	£12.95	£15.95
Italian Tutor	£12.95	£15.95
Iankey Crash Course (6128/PCW)	£19.90	
Iankey Two Finger (6128/PCW)	£19.90	
Fun School 2 (U5s, 6-8, 8+)	£7.99	£9.99

PLEASE NOTE OUR NEW ADDRESS

Due to the growth of our business we have had to move to much larger premises. Shop Open 9 till 6 Mon-Sat
We cater for most computers. Huge discounts on all products.

K & M COMPUTERS (N.C.E.),
140, SANDY LANE CENTRE,
SKELMERSDALE,
LANCS, WN8
*** 24 HRS PHONE 0695 29046 ***

50p VOUCHER SENT WITH EVERY ORDER

WHEN ORDERING PLEASE STATE MAKE OF COMPUTER.
 PLEASE MAKE CHEQUES & P.O. PAYABLE TO K & M COMPUTERS.
 OVERSEAS INC. EIRE ADD £1 PER ITEM OF SOFTWARE.
 WE SUPPLY GOVERNMENT & EDUCATIONAL ESTABLISHMENTS.

464 UPGRADE ROM
 NOW AVAILABLE
 ONLY £16.99 FROM US

SPECIAL PRICES ON
 A.M.S. SOFTWARE
 StopPress £39.95
 StopPress & Mouse £72.95
 Mouse & Art £61.95
 Mouse Mats £4.95
 Max £16.95
 Extra Extra £21.95

KDS ELECTRONICS
 SPECIAL OFFERS
 Rombox £24.95
 1512 Second Drive £158.95
 18 Bit Pr. Port £18.75
 Serial Int. + Rom £44.95
 Printer T Switch £24.95
 Screen Master £14.95
 Ramdos (Disc) £23.95
 Romdos (Rom) £27.95
 KDS Modems are no longer available

MINI OFFICE II
 STILL OUR No 1 SELLER
 Cass. £11.25 Disc. £14.75

AMSOFT/MAXELL 3" DISCS

One	£2.50
Five	£12.50
Ten	£24.95
5½ Discs	TEN £3.90
3½ Discs	TEN £9.50

ROMANTIC ROBOT
 QUALITY PRODUCTS
 AT DISCOUNT PRICES
 Insider £13.95
 Multiface II+ £44.95
 Rodos (on rom) £25.95
 Rodos extra £8.75

ALL OUR PRICES
 INCLUDE VAT + P & P
 NOTHING EXTRA TO PAY
 IN STOCK ITEMS SENT
 BY RETURN OF POST
 NO MINIMUM ORDER

SPECIAL OFFER
 ORDER ANY FIVE
 £1.80 BUDGET GAMES
 AND PAY ONLY £8

DMP 2000/2160/3000

RIBBONS

£3.99	EACH
£6.99	FOR TWO
£15.50	FOR FIVE

PCW OWNERS

WRITE OR PHONE FOR
 NEW CATALOGUE
 PC200 SOFTWARE AVAILABLE
 PRICES IN THIS ADVERT
 ARE FOR AMSTRAD 464/6128

ACCESS ORDERS BY PHONE OR MAIL
 N = NEW RELEASE
 PLEASE PHONE FOR AVAILABILITY
 AND OTHER NEW RELEASES



The hotware revolution

A terrifying vision of the future from Dave Langford

The end of the world came in the late 1990s, when the entire nuclear industry was deregulated and privatised. Unfortunately for the political theorists responsible, the dynamic entrepreneurs who rushed into this new boom area proved to be the same ones who for years made the home computer business such a joy...

"Expansion, squire, that's what you have to think about. 'S an investment. You don't want to be trading it in for a bigger model next month, do you? OK, right now you think five hundred and twelve megawatts sounds an awful lot. That's what they'll say before they get hands-on experience. Hook up a few add-ons, though, a few extra cookers and central heating systems, a bit of light industrial plant, and you'll soon see it would have made sense to get the best you could... And don't forget the summer special offer. Heat exchanger, three-phase generator and half a mile of barbed wire fence bundled absolutely free!"

"Hello, this is Megabuck Hotware, can I help you? Support? You want...support? I'll see if Maisie knows anything about that. It's urgent? A radioactive cloud spreading down your back garden? I'm sorry, sir, the switchboard can't handle hardware queries..."

"Blimey. No wonder you've got problems. Fancy trying to run your business with a clapped-out old British Bequerel Corporation system... I don't care what it cost, it's not wossname, not International Breeder Manufacturers standard, is it? Shouldn't have bought an enthusiast's machine like that. Even if they do both take five-and-a-quarter inch fuel rods, the threading's different."

"Leaking? We sell two hundred of these plutonium reprocessors every month and we've never had that complaint before, sir. I'll pass it on to head office, but are you certain you've followed the proper start-up procedures in the footnote on page xiii of Appendix C in the user manual supplement? ...Well read the sodding manual! Honestly, some people... In Swedish? Yeah, well, a few went out in Swedish, but we've got a new edition on order now."

"No trouble. For full technical backup, call our 24-hour hotline number. Er, yes, it is in the USA - Three Mile Island Support Services Inc - I'm sure they'll suss your problem in no time."

"Sorry, sunshine. When you fixed the crack in the fission chamber with superglue, it no doubt worked very well for you and I'm sure you're proud of your cleverness, but you've invalidated The Warranty. No user serviceable parts, it says right there on the shielding. You want to add a medical irradiation facility,

you let the professionals do it. Like I said, I'm sorry but there it is. Can't lift a finger now, not even if the kids do still glow in the dark."

Magazine review, 1999: "New Release! Ian Sinclair's comprehensive guide OS/2 Reactor Decommissioning Techniques Made Easy has scored a first ever for this remarkable writer, by appearing months before the hot new OS/2 reactor has been officially confirmed as 'to be announced'. Nevertheless, this useful handbook will be a must for anyone faced with that familiar problem of decommissioning a major r/a hazard in the back garden or spare room. A handy periodic table of the elements is included as an appendix."

"Yeah, well, that's a popular machine right, but of course it's slow. AmRad cut their costs with graphite-pile technology, and those three-inch fuel rods are specially enriched: that's why they're so expensive, don't blame the dealers. We can do you a transformer to link your AmRad to the same power grid as an industry-standard Pressurized Containment system, though. Sit down before I tell you the price."

"Of course, a go-ahead magazine like Personal Nukes hasn't got space for articles on the sort of hotware you pathetic home users can actually buy. We're talking fifth generation here. Laser enrichment, 80486-gigawatt fusion technology, and there's a good chance it'll be working in the early 2000s..."

"Never, never, never put a strange fuel element into your personal reactor! Without wanting to be alarmist, I must warn you that some shareware rods are reported to be infected with the Armageddon Catalyst which on 1st January 2000 will vaporize, blow holes in your shielding, erupt in a thermonuclear fireball and precipitate global holocaust. There is also the Pedantic Armageddon Catalyst which will do the same a year later, on 1st January 2001, for users who are fussy about when the millennium really ends. Fortunately, I can offer a complete protection system for only £15 plus VAT..."

"I'm sorry, I'm going to have to put you on hold. Yes, we do have fifty-two support lines but they're all engaged. No, I'm afraid I'm not qualified to give information about melt-downs. In any case our warranty is limited to replacing the faulty product." (Cut to sound of "On Hold" music, Vera Lynn singing "We'll Meet Again.")

...Thus the hotware boom followed lines familiar to any computer sufferer. It was a great pity that when one big-name company finally released the exciting new fissile material handling system which had been hyped since 1996, they found that - most embarrassingly - one of those little hardware glitches made the new product incompatible with the continued existence of the human race. But free replacements and upgrades were promised at the earliest possible date.

EXT EEEK

A - Z of computing

The first of a week-by-week Encyclopaedia of computing - free! Part 1 of Express's fact-packed guide to machines, technical jargon, personalities, companies, games, the universe and everything

DTP

How new technology is affecting the press

Games systems

Packages that let you write your own games: we reveal the best

Spectre 128

Can Hisoft's new package turn your ST into an Apple Macintosh?

Rejoyce

The story of the PCW

PLUS

Another fricassee of features, reviews, tips, news and comment from the world of computing

**On sale
Thursday
April 20th**

**Only
48p!**

**Order yours
now!**



TREBLE H COMPUTING

ATARI GIFT PACK

ATARI 520 STFM 1 MEG DRIVE
MOUSE, LEADS + MANUAL
FREE JOYSTICK
FREE 80 CAP. DISK BOX
FREE 10 x 3 1/2" DS/DD DISKS
FREE MOUSE MAT
SOURCE BOOK + TUTORIAL
ALL FOR ONLY £384.99

ACCESSORIES

Amiga A501 RAM Upgrade	£129.99
ST Multiface	£49.95
Disk Organiser for Above	£10.00
Workbench 1.3	£13.50
Joystick/Mouse Extension	£5.50
Disk Drive Cleaner (3.5 or 5.25)	£4.95
Mouse Mat (Soft)	£4.50
ST or Amiga Dust Cover	£6.50
Amiga to Scart Lead	£9.95
ST to Scart Lead	£9.95
Quickshot II Joystick	£8.50
Cheetah 125+ Joystick	£6.95
DCOMJoystick (Fully Microswitched)	£9.95
Competition Pro 5000 (Black)	£11.50
Competition Pro 5000 (Clear)	£12.50
50 x 3.5" Disk Labels	£1.20
80 Capacity 3.5" Disk Box	£8.95
Monitor Covers From	£6.95
Konix SpeedKing	£10.50
Konix Navigator	£12.25

MUSIC AND SOUND

ST	
Steinberg Pro-24	£259.99
C-Lab Creator	£249.99
C-Lab Notator	£384.99
EZ Track Plus	£49.95
Super Conductor	£39.99
Pro Sound Designer	£49.99
ST Replay 4	£69.99
AMIGA	
Aegis Sonix V.2	£44.95
Aegis AudioMaster II	£59.95
Amas	£84.95
Future Sound	£79.95
Perfect Sound	£79.95
Pro Sound Designer Gold	£79.95
Midi Interface	£24.95
Music X	Phone

ATARI 520 STFM 1 Meg Drive	£275.99
ATARI 520 STFM 1 Meg Drive + Super Pack	£369.99
ATARI 1040 STFM + Professional Pack or Super Pack	£449.99
** NEW ** MEGA ST 1 NOW AVAILABLE inc. PROFESSIONAL PACK..	£549.99
ADD £99.99 TO INCLUDE SM124 MONO MONITOR WITH ANY OF ABOVE	
AMIGA 500	£379.99
AMIGA 500 Inc. 1/2 Meg RAM Expansion + Dragon's Lair	£499.99
AMIGA 500 + 1084S Med Res Colour Monitor	£599.99
AMIGA AIR MILES PACK, Includes Spritz Paint, Disk Wallet, Roger Rabbit, Star Way, Nebulus, 500 Miles Air Travel Voucher	£449.99

GAMES SOFTWARE

ST	AMIGA
Archipelagos	£17.99
Balance of Power 1990	£17.99
Ballistix	£14.99
Barbarian II	£14.99
Battlehawks 1942	£17.99
Blasteroids	£17.99
Butcher Hill	£14.99
Cosmic Pirates	£14.99
Dark Fusion	£15.99
Dragonscape	£14.99
Dragon's Lair (1 Meg)	£34.99
Dungeon Master	£17.99
Elite	£17.99
Falcon	£17.99
Fed. til Free Traders	£20.99
Football Director II	£13.99
F-16 Combat Pilot	£17.99
Galdregon's Domain	£14.99
Gold Rush	£17.99
Human Killing Machine	£10.99
Hybris	£17.99
Inc. Shrinking Sphere	£14.99
International Karate +	£17.99
Kick Off	£14.99
Kings Quest IV	£20.99
K. Dalglish's Soccer Mgr	£14.99
Leaderboard Birdie	£17.99
LeisureSuit Larry II	£17.99
Lords of the Rising Sun	£20.99
May Day Squad	£14.99
Malinium 2.2	£15.99
Microprose Soccer	£17.99
Operation Neptune	£17.99
Operation Wolf	£14.99
Outrun Europa	£10.99
Pac-Land	£14.99
Police Quest II	£17.99
Prison	£14.99
R-Type	£15.99
Rambo III	£14.99
Realm of the Trolls	£15.99
Ringside	£17.99
Road Blasters	£14.99
Robocop	£14.99
Rocket Ranger	£20.99
Roger Rabbit	£17.99
Roy til the Rovers	£15.99
Run the Gauntlet	£14.99
Speedball	£17.99
Super Hang-On	£17.99
Sword of Sodan	£17.99
Steve Davis Snooker	£14.99
The Kristal	£20.99
The Real Ghostbusters	£15.99
T.V. Sports Football	£20.99
War in Middle Earth	£17.99
World Class Leaderboard	£17.99
Zak McKraken	£17.99
Zombi	£17.99
3D Pool	£17.99

AMIGA GIFT PACK

AMIGA 500
MOUSE, LEADS + MANUALS
FREE MODULATOR
FREE JOYSTICK
FREE 80 CAP. DISK BOX
FREE 10 x 3 1/2" DS/DD DISKS
FREE MOUSE MAT
WORKBENCH + MANUAL
ALL FOR ONLY £399.99

MONITORS

ATARI SM 124	£109.99
ATARI SC 1224	£289.99
COMMODORE 1084S	£259.99
PHILIPS 8833	£249.99

DRIVES

CUMANA 1 MEG 3.5" for ST	£99.99
CUMANA 1 MEG 3.5" for Amiga	£94.99
TRIANGLE 1 MEG 3.5" for ST	£94.99
TRIANGLE 1 MEG 3.5" for Amiga	£84.99
TRIANGLE 5.25" for ST or Amiga	£114.99
TRIANGLE 3.5" + 5.25" Multidrive	£194.99

PRINTERS

STAR LC10 mono inc Cable	£214.99
STAR LC10 colour inc Cable	£249.99
CITIZEN 120/D inc Cable	£139.99
EPSON LX800	£244.99
STAR LC 24/10 inc Cable	£324.99

HARD DRIVES

ATARI, SUPRA AND TRIANGLE AVAILABLE.
PLEASE CALL FOR * BEST PRICES *

ART & ANIMATION

ST	
Degas Elite	£19.95
Cyber Paint 2	£59.95
Cyber Studio CAD 3D	£69.95
Spectrum 512	£44.95
Quantum Paint Pro	£32.95

AMIGA

Lights, Camera, Action	£49.99
Zoetrope	£84.95
Aegis Videoscape 3D	£109.99
Deluxe Paint II	£47.99
Comic Setter	£44.99
Mini-Gen (Genlock)	£104.99
Moviesetter	£59.95

IF YOU CAN NOT SEE WHAT YOU WANT, PLEASE CALL AS WE CAN NOT LIST EVERYTHING AVAILABLE

ATARI PC's from £599, Commodore PC's from £345
A2000's • Laser Printers • ST RAM Upgrades • Monitor Stands • Business Software • Educational Software • Printer Ribbons • Printer Leads • Printer Stands • ST Clocks • Languages • Replacement Mouse •

CALL FOR BEST PRICES

TREBLE H COMPUTING

DEPT N.
CROMER HOUSE
CAXTON WAY
STEVENAGE
HERTS
SG1 2DF

TEL: 0438 361738
FAX: 0438 740794

All prices include VAT
Please send Cheques/PO made payable to:-

TREBLE H COMPUTING

add £2.00 for Europe & £3.00 for overseas.
£6.00 for Securicor Next Day Delivery

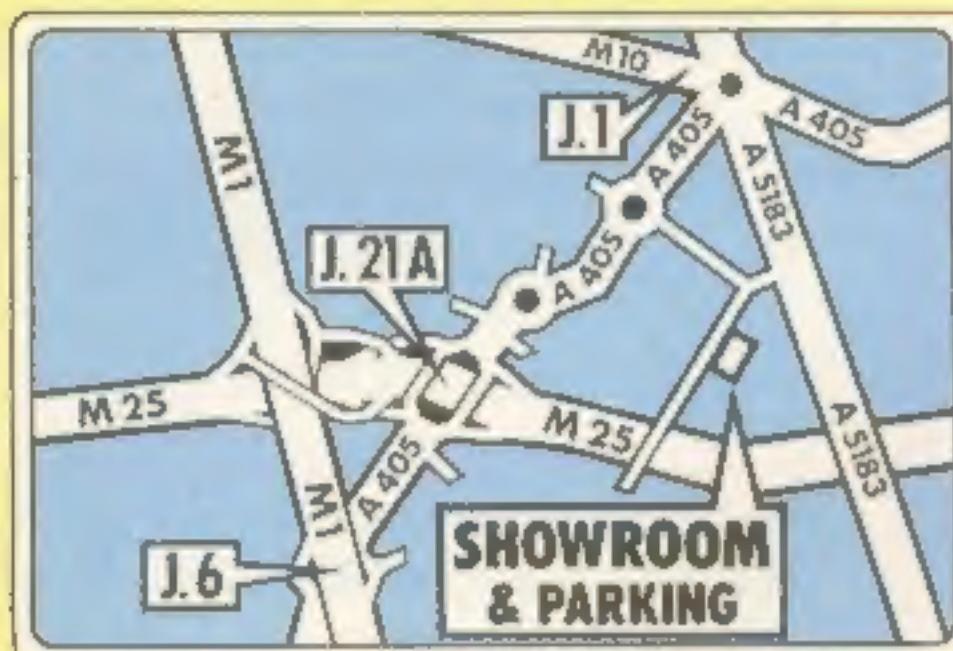
PERSONAL CALLERS
WELCOME
OPEN 9-6 Mon -Sat ,

Shop prices may differ on certain items

All prices are correct at time of going to press and are subject to change without prior notice

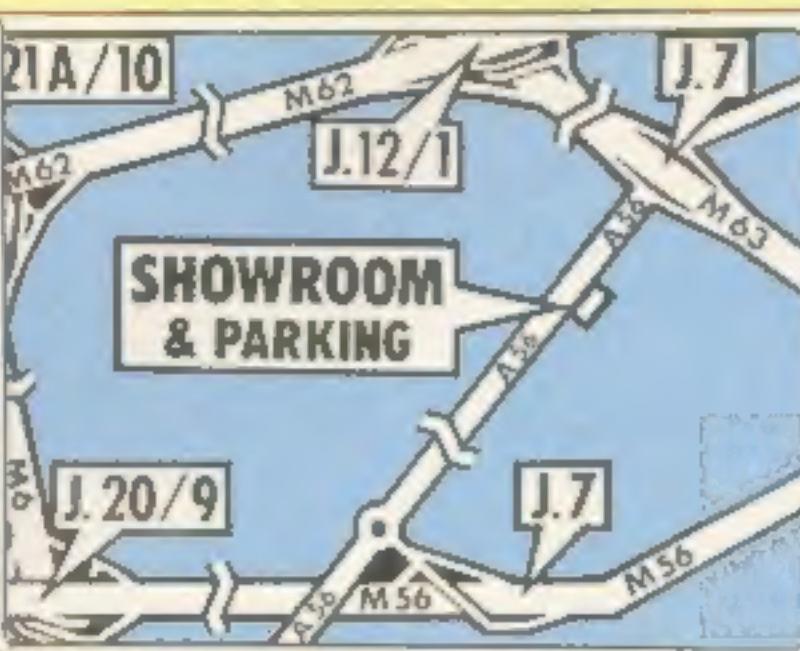
Where do you buy an Amstrad 30Mb 2086 with colour monitor for £1091* at 3.45 on Saturday afternoon?

NORTH LONDON



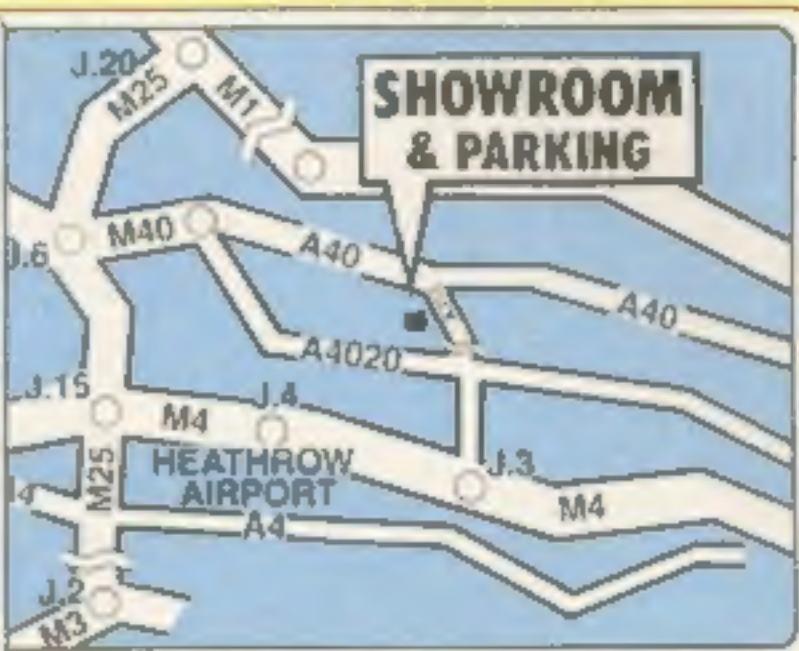
99 PARK STREET LANE
BRICKET WOOD
ST. ALBANS, HERTS
(0727) 72790

MANCHESTER



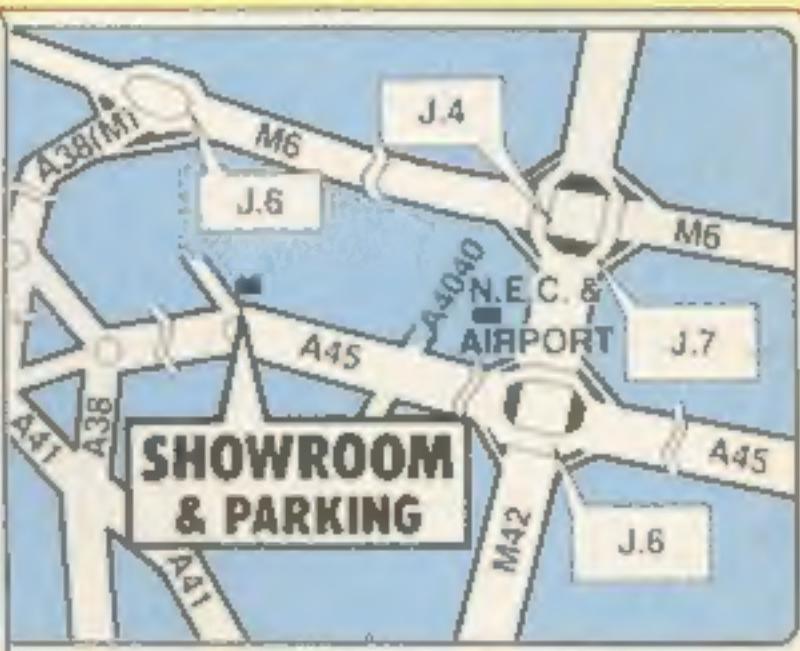
85 WASHWAY ROAD
(OPPOSITE IBM)
MANCHESTER
061-962 0780

WEST LONDON



304 KINGSHILL AVENUE
(off Uxbridge Road)
HAYES, MIDDLESEX
01-841 8744

BIRMINGHAM



1046-1048 COVENTRY RD
HEYMILLS, BIRMINGHAM
021-772 5212

SHOWROOM OPENING HOURS: Monday-Friday 9am-6pm Saturday 10am-5pm

COMPUTER

EXPRESS

AMSTRAD 2086 30Mb with COLOUR MONITOR*

The new trend setter from Amstrad. 8MHz 3086cpu for excellent software compatibility. Fast 30Mb Hard Disk and 640K RAM. Windows 2 with every machine. Every unit fully tested in addition to our extra 28 days Customer Assurance Warranty.

£1091

not to mention

EPSON LX800

This latest offering from Epson zips along at 150cps in draft and 25cps in NLO. Comes complete with Parallel Esc-P or IBM Parallel interface as standard, plus top mounted tractor feed. Good clear typeface, and 80 column wide. Colour version printing 7 colours.

£159.00
£214.00

STAR LC-10 COLOUR

The star of the printer world. Already its topping the hit parades. For the money no other printer offers so much. 80 column multifont printer with 8 resident fonts and paper parking. 144cps draft and 36cps in NLO quality.

£219.00
£175.00

TIMWORKS

The latest in low-cost DTP. An excellent package for anyone wanting to make a start in DTP for a very modest sum. Timeworks is very popular, and has good telephone support from the manufacturer and ourselves.

£89.00

NEC P2200

At last! 24 pin quality that anybody can afford, with NEC's renowned reliability to match. This little baby cruises along at 168cps in high speed, 140cps in standard and a really nippy 56cps in 24 pin letter quality mode. This printer should be on any discriminating buyers list. NEC P2200.

£289.00
£29.00

AMSTRAD 2000 Series

NEW 2086 range available from stock NOW!		
Single Drive 12" Mono	£566	Single Drive 14" Colour
Single Drive 12" Colour VGA	£806	Single Drive 14" Colour VGA
Double Drive 12" Mono	£711	Double Drive 14" Colour
Double Drive 12" Colour VGA	£949	Double Drive 14" Colour VGA
30 Mb Hard Disk 12" Mono	£949	30 Mb Hard Disk 14" Colour
30 Mb Hard Disk 12" Col VGA	£1189	30 Mb Hard Disk 14" Col VGA
NEW 2286 IBM AT compatibles		
Double Drive 12" Mono	£919	Double Drive 14" Colour
Double Drive 12" Colour VGA	£1149	Double Drive 14" Colour VGA
40 Mb Hard Disk 12" Mono	£1239	40 Mb Hard Disk 14" Colour
40 Mb Hard Disk 12" Col VGA	£1489	40 Mb Hard Disk 14" Col VGA
NEW 2386 ideal for serious computing and networking		
65 Mb Hard Disk 12" Mono	£2439	65 Mb Hard Disk 14" Colour
65 Mb Hard Disk 12" Col VGA	£2669	65 Mb Hard Disk 14" Col VGA

We're there because you're there.

FOR FULL PRICE LIST PLEASE CALL
EXPORT & TRADE ENQUIRIES WELCOME
TELEPHONE & MAIL ORDERS WELCOME



CALL 0727 37451



MICRO-COMPUTERS, PERIPHERALS
SOFTWARE, SALES & SUPPORT
CREDIT CARDS NOT DEBITED UNTIL DESPATCH

OPENING IN 1989: LEEDS, NEWCASTLE, GLASGOW, BRISTOL & SOUTH LONDON

* All prices exclude VAT and delivery